76th Congress, 1st Session - - - - - - House Document No. 209

ECONOMIC SURVEY OF COASTWISE AND INTERCOASTAL SHIPPING

LETTER

FROM THE

CHAIRMAN, UNITED STATES MARITIME COMMISSION

TRANSMITTING

THE ECONOMIC SURVEY OF COASTWISE AND INTERCOASTAL SHIPPING

MARCH 16, 1939.—Referred to the Committee on Merchant Marine and Fisheries and ordered to be printed with illustrations

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UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1939

LETTER OF TRANSMITTAL

UNITED STATES MARITIME COMMISSION,
Washington, March 15, 1939.

To the Congress of the United States:

I have the honor to transmit herewith the Economic Survey of Coastwise and Intercoastal Shipping, which has just been completed by the United States Maritime Commission, pursuant to the Merchant Marine Act, 1936, as amended.

It is the Commission's belief that this survey will be helpful to the Congress in dealing with problems confronting the industry and that adoption of the recommendations contained herein will assist in the rebuilding of the American Merchant Marine.

Very respectfully yours,

E. S. LAND, *Chairman.*

CONTENTS

APPENDIXES

ECONOMIC SURVEY OF COASTWISE AND INTERCOASTAL SHIPPING

INTRODUCTION

The intricate transportation system of the United States requires the effective use of every agency to maintain the flow of commerce. In the movement of commodities and passengers between the Atlantic and Pacific seaboards, between the mainland and the noncontiguous Territories, as well as from port to port along these seaboards, the coastwise and intercoastal services play an important role. These shipping services are important not only as links between our commercial ports, and as factors in our national business transactions, but are themselves large and fundamental business organizations, and their services as elements in our national economic life depend upon their position and growth as business enterprises and upon governmental policies affecting them. Whatever the economic position of the coastwise and intercoastal shipping industries, it is obvious that our ocean-going domestic merchant marine has a vital relation to national security, and that our merchant marine policies, as they are formulated, must ultimately be determined by our fundamental requirements in this respect.

Under the Merchant Marine Act, 1936, the Maritime Commission was directed to investigate the intercoastal shipping industry. It was also directed to submit to the Congress such recommendations as might appear necessary better to effectuate the purposes and policy of the act which states that—

> The United States shall have a merchant marine * * * sufficient to carry its domestic water-borne commerce and * * * capable of serving as a naval and military auxiliary in time of war or national emergency. * * *

This report, covering coastwise as well as intercoastal ocean shipping, will be followed by another to be submitted to the Congress, dealing with transportation on inland waterways.

Under existing statutes, the term "coastwise trade" includes trade between any port in continental United States or between the continental United States and its noncontiguous possessions of Hawaii, Alaska, and Puerto Rico, all of which trade is exclusively reserved to American flag vessels. As used in this report, however, coastwise trade is defined as trade along the Atlantic, Gulf, and Pacific coasts, as well as trade between the continental United States ports and the noncontiguous American Territories of Hawaii, Alaska, and Puerto Rico, while trade moving between east and west, by way of the Panama Canal, is referred to throughout as intercoastal trade.

Coastwise shipping is one of the oldest American commercial enterprises, and the intercoastal trade, since the opening of the Panama Canal in 1914, has been of great importance. In the amount of cargo handled, the coastwise shipping outranks the intercoastal. In the

year 1937, roughly 119 million short tons of cargo were handled by vessels of 1,000 gross tons and over, operating in the coastwise trade as compared with approximately 7 million short tons handled by the intercoastal lines, operating vessels of over 1,000 gross tons. To preserve the proper perspective, however, it should be pointed out that the railroads of the United States in the same year handled over 1 billion tons of freight, while approximately 300 million tons moved by truck.

The domestic trade fleet comprises 877 vessels of 1,000 gross tons and over, representing 4½ million tons of shipping, as compared with 543 vessels of 3½ million tons in the foreign trade fleet, and the amount of cargo that is carried by the domestic fleet is greater than that handled by American ships in foreign trade. National defense, therefore, demands that the domestic merchant fleet be maintained and improved. The importance of the domestic shipping industry, coastwise and intercoastal, cannot be measured solely in terms of its proportional share in the transportation of goods. This industry provides a means by which commodities which cannot stand a relatively high freight rate may be profitably distributed over a wide area and, in making such a wide distribution possible, both the producer and consumer, wherever located, are benefited. The domestic shipping industry is a necessary part of the American transportation system.

Shipping officials and university teachers, as well as the staff of the Maritime Commission and other experts, collaborated in the preparation of this report.

Among those who contributed to the survey are Dr. Roland L. Kramer, professor of commerce and transportation, Wharton School of Finance and Commerce, University of Pennsylvania; Lt. Raymond F. Farwell, United States Naval Reserve, associate professor of transportation, University of Washington; Dr. D. Philip Locklin, associate professor of economics, University of Illinois; Dr. A. Stuart Campbell, associate professor of economics, University of Florida; Mr. H. E. Stocker, assistant professor of transportation, New York University; and Mr. Irwin M. Heine, business specialist, Bureau of Foreign and Domestic Commerce, United States Department of Commerce.

The survey staff was instructed to make a factual analysis of the coastwise and intercoastal trades. Operators were invited to submit to the Commission comments relating to the industry. Labor representatives and labor experts were consulted. Questionnaires were sent to the common, contract, and private carriers operating vessels of 1,000 gross tons and over in the coastwise and intercoastal trades. The cooperation of the industry was reflected in the high percentage of returns to the questionnaire. As the result of an analysis of the data, the major inquiries covering the coastwise and intercoastal shipping were reduced to the following:

I. What part do coastwise and intercoastal shipping play in the national economy?
II. How important are coastwise and intercoastal shipping to national defense?
III. What is the present status of the domestic merchant marine?
IV. What factors are largely responsible for the present condition of the domestic merchant marine?
V. How can these conditions be improved?

I. WHAT PART DO COASTWISE AND INTERCOASTAL SHIPPING PLAY IN THE NATIONAL ECONOMY?

Coastwise and Intercoastal Shipping in the National Economy

HISTORICAL SKETCH

In colonial days, shipping along the Atlantic coast was the only important method of transportation. As our commercial interests spread to the British, French, and Spanish possessions in the West Indies and the Gulf of Mexico, our early sailing ships appeared at ports in those areas. With the expansion of American territory to include the Peninsula of Florida and an area contiguous to the Gulf of Mexico, these water carriers occupied a foremost position in our domestic transportation system. Cities built along the seacoast became the leading commercial centers of the Colonies, and to this day some of them continue to be the focal points of our greatest metropolitan areas.

The policy of restriction of the coastwise trade to United States vessels was adopted by statute as early as March 1, 1817. Since that time Congress has reserved, with few exceptions,[1] our coastwise and intercoastal trades for vessels documented under our laws and built in American shipyards. This protection was extended not only from time to time as new seacoast was acquired, but to noncontiguous territory as well. Congress in 1868 extended our navigation and "coasting trade" laws to the Territory of Alaska, and in 1898 and 1899 extended the application of our coastwise laws to Puerto Rico and Hawaii, and restricted United States trade at those islands to American ships.

The intercoastal trade, in its present meaning, dates from the opening of the Panama Canal in 1914. The earliest water route between the two coasts of the United States was by way of Cape Horn, or Magellan. Later, steamship lines operated between the Isthmus of Panama and both the Atlantic and Pacific coasts of the United States. The Panama Railroad, constructed in 1854, enabled passengers and freight to be transported across the Isthmus. The immediate incentive to the establishment of this service was the discovery of gold in California, leading to the famous gold rush of '49.

It was not until 1869 that the first transcontinental railroad was completed; and the conflict to divert traffic from "sail to rail" began. Other transcontinental railroad routes were established, but even as late as 1878 it was estimated that not over 25 percent of the total tonnage moving to California was shipped by rail.

These two methods of transportation—rail and water—continue today as the major carriers of freight between the Atlantic and Pacific seaboards. Motor lines participate in the traffic by operating over relatively short distances beyond water terminals. Long-distance motor operation, particularly in the transcontinental run, is still in the experimental stage. Air lines are merely complementary and serve the purposes of passenger, express, and mail transport.

The fundamental basis of the commerce that is carried by coastwise and intercoastal carriers is a question of geography. Measuring 11,936 statute miles (in units of 1 statute mile), the tidal shore line of continental United States presents a varied aspect from a physical geo-

[1] The act of August 18, 1914, the act of October 6, 1917, and sec. 22 of the Merchant Marine Act, 1920,—rendered eligible to engage in domestic trade nearly 1,000,000 gross tons of foreign-built shipping.

graphic point of view. The Atlantic coast, with a tidal shore line of 5,565 statute miles, is characterized by a rugged coast line from Maine to New York; and southward of New York Bay, by one that is low and flat, although irregular in character. The Gulf coast has a tidal shore line of 3,641 statute miles, which is somewhat irregular in character. Compared with the Atlantic and Gulf coasts, the Pacific coast, with a tidal shore line of 2,730 statute miles, is generally high and rocky, with few natural harbors. The extensive inlet of Puget Sound, the Bay of San Francisco, and the mouth of the Columbia River are the only three principal indentations along the Pacific coast.

The widely scattered sections of the 3,000,000 square miles of territory contained within continental United States differ in their natural resources and climate, and they are nearly as distinct as separate, independent countries. We have at our command what is recognized as the greatest free-trade market in the world.

GENERAL ECONOMIC IMPORTANCE

Intercoastal and coastwise shipping occupy an important place in the transportation system of our country. This importance cannot be measured solely in terms of traffic statistics, or even in fleets of vessels. In broad terms, the transportation equipment of the Nation embraces railway cars and locomotives, motortrucks and busses, barges and ships, and aeroplanes. Each offers certain specific contributions to our national economy.

1. *Economy of water transportation.*—The relatively low cost of water transportation facilitates the interchange of products between the various economic areas in the country. This benefits trade, not only between port cities but also with the interior of the continent, by connecting rail, barge, and truck routes. For example, traffic from as far west as Illinois has moved to New York or Philadelphia for intercoastal shipment to the Pacific coast; on the Pacific coast the influence of water rates has reached as far inland as points in Montana, Idaho, Utah, and Arizona; freight from Chicago to the Pacific coast moves by barge or rail to New Orleans and thence via intercoastal water lines; and products from inland points in the New England and Middle Atlantic States, destined to the vast southwestern area of Arkansas, Oklahoma, Texas, and western Louisiana, has the advantage of through rail-water-rail routes through the North Atlantic and Gulf ports in connection with the coastwise steamship lines.

The low price of many basic raw materials precludes their shipment for long distances unless economical transportation is available. The movement of such commodities as lumber, petroleum, sulfur, phosphate rock, and in some instances commodities of higher value, have been attracted to coastwise and intercoastal water lines because water carriers are in a position to offer lower rates than other transportation agencies between the same points.

2. *Extension of markets.*—The extension of existing markets is frequently a result of low-cost transportation by water. A few examples will serve to illustrate this point.

The principal product moving to the East in intercoastal trade is lumber from the Pacific Northwest. The volume of lumber that

moves over this route to eastern markets, and also by water to California, constitutes an important outlet for the Pacific lumber industry.

Iron and steel are the principal commodities moving in west-bound intercoastal trade. Again, low-cost transportation is doubtless a factor in the price paid on the Pacific coast for iron and steel produced in eastern plants. Large-scale steel production is confined generally to an area at least 2,000 miles from the Pacific coast. The expense of shipping some bulky steel products by rail, as compared with the cheaper method of shipping by water, constitutes a saving to western users.

Another commodity, the distribution of which is affected by low-cost water transportation, is flour, moving from the Pacific Northwest to California. Potash, manganese, and wood pulp have also found new markets as a result of water transportation.

One of the most convincing illustrations of the part played by water transportation in the development of markets is provided by the paper industry of the South. It was pointed out in a recent decision [2] of the Interstate Commerce Commission that—

> The production of paper in the South has been developed principally within the past 15 years. Some of the older mills are located at interior points, but the more recent development has been at points on or near navigable water.

The chief centers of production are located in a number of Southern States from which the traffic moves largely to the seaboard and thence by coastwise water transportation to northern markets.

3. *Importance to seaports.*—There is a general tendency to attribute the importance of seaports in the United States to foreign trade. Many ports, such as Philadelphia, Baltimore, Newport News, Norfolk, and Los Angeles, transact a greater volume of coastwise and intercoastal business than of foreign. Thus, certain of our seaports are largely dependent upon the continuance of our coastwise and intercoastal trades.

Moreover, maritime commerce, whether domestic or foreign, maintains, or helps to maintain, such auxiliary services as warehousing, ship supplies, bunkering, freight forwarding, marine insurance, banking, and other services.

4. *Supply of transportation in case of national emergency.*—Domestic water transportation was an important factor in relieving the congestion of the rail transportation system during the period when the United States was engaged in the World War. In case another such national emergency should arise, every form of carriage available would be needed, and the water carriers would be indispensable in bearing their share of the burden placed upon the Nation's transportation facilities by the heavy movement of traffic.

5. *Employment.*—The coastwise and intercoastal trades directly and indirectly provide employment for tens of thousands of persons. To attempt to measure the number of persons employed in an industry by the number necessary to operate the physical plant is not a true indication of the employment potentialities of that industry. This is especially true in considering an industry which is one of the important distributive factors in our economic life.

Compared with the steel or automotive industries, for example, the number of persons employed in domestic shipping is relatively small.

[2] Paper from the South and Southwest, 218 I. C. C. 202, decided Aug. 14, 1936.

Its real significance, however, can be more fully understood when the collateral activities of other occupations which depend entirely or to a great extent upon domestic shipping are analyzed. In this connection it is only necessary to consider how employment would be affected in the following industries should domestic shipping cease to be a factor in our transportation economy: shipbuilding, drydock and repair, stevedoring, warehousing, marine insurance, financing, brokerage, fuel and supplies, towage, wreckage, and salvage.

Despite the competition of the railroads and motortruck lines with domestic shipping, the number of persons employed in these industries by reason of their supplementary activity of connecting with water lines from and to inland points, is large. It seems evident, therefore, that the employment function of the coastwise and intercoastal trades affects materially a group beyond the mere confines of the industry as effectively as those employed directly by the domestic shipping industry itself.

6. *Industrial location.*—Transportation is a major factor in determining new locations for industries. As stated above, the location of our leading cities was determined largely by the accessibility to water transportation. Industries that supply or use bulk commodities find it advantageous to locate on navigable waterways in order that transportation costs incurred in moving these commodities may be reduced to a minimum. Some of the industries supplying or using the major products moving in coastwise and intercoastal trades—lumber, coal, petroleum, sulfur, naval stores, etc.—owe their development partly to low-cost water transportation facilities.

It is likely that many eastern manufacturers would not have found it advantageous to locate branch factories and warehouses on the Pacific coast were not water transportation available.

COMMODITY AND PASSENGER MOVEMENTS

Summary of water-borne commerce.—The total foreign and domestic water-borne commerce of the United States, amounted in 1937 to 583,100,000 short tons. Of this total, 119,000,000 tons were moved in the domestic coastwise trade by companies operating vessels of 1,000 gross tons and over, and 7,000,000 tons in the domestic intercoastal trade by companies operating vessels of 1,000 gross tons and over.[3]

Intercoastal commodity movements.—The east-bound intercoastal tonnage movement is about twice that of the west-bound movement. In the 3-year period, 1935–37, this east-bound tonnage movement comprised 64.8 percent of the total.

While the intercoastal movement east-bound includes many commodities, 87.7 percent consists of eight classes of products, listed in order of importance: Logs and lumber, petroleum and petroleum products, canned and dried fruits, wheat and wheat flour, paper stock and manufactures, sugar, vegetables and products, and canned fish.

The west-bound intercoastal movement likewise includes many commodities, with 69 percent comprising six classes of products in the following order of importance: Iron, steel, and manufactures; pigments, chemicals, and products; sulfur; vegetables and products; petroleum and petroleum products; and paper stock and manufactures.

[3] Both the coastwise and intercoastal figures would be somewhat larger if traffic moved in vessels under 1,000 gross tons were taken into account.

Coastwise commodity movements.—Coastwise commerce is not balanced as between the several geographic regions. Petroleum is the leading commodity moving in the coastwise trade of the United States, accounting for 70 percent of the total in 1937.

In the Atlantic coastwise trade, coal is a commodity of outstanding importance. Other commodities moving in large volume are sulfur, phosphates, lumber, iron and steel manufactures, fruits, copper, asphalt, flour, paper, sand and stone, and naval stores.

Petroleum and petroleum products, phosphates, paper and paper products, fresh and canned citrus, sulfur, iron and steel, chemicals, and canned goods, comprise the principal commodities moving in the Gulf coastwise trade.

The principal commodities moving in the Pacific coastwise trade are petroleum and petroleum products, lumber and lumber products, grain and grain products, paper and manufactures, chemicals, salt, sugar, textiles, soap, fish and fish products, and canned goods.

Passenger movements in the domestic water-borne traffic of the United States.—In 1937, 3,744,131 passengers were carried in the water-borne traffic of the United States. Of this total, 52.4 percent was foreign, 43.7 percent coastwise, 3.3 percent noncontiguous, and 0.6 percent intercoastal. No regular coastwise passenger service is operated on the Pacific coast, except to Alaska and to Hawaii.

Traffic with noncontiguous Territories.—In 1937, the commerce between the United States and the noncontiguous Territories of Puerto Rico, Hawaii, and Alaska amounted to 4,222,120 short tons. Receipts from the Territories constituted 58.7 percent, and shipments, 41.3 percent of the total in that year.

Of the total commerce, Hawaii accounted for 49.9 percent, and Puerto Rico 35.5 percent, while Alaska's share was 14.6 percent.

The Hawaiian Islands trade.—The Hawaiian Islands, with a population of 396,715 in 1937, are situated 2,000 miles off the Pacific coast on the sea route to the Orient, South Sea Islands, and Australia. Traffic between the Hawaiian Islands and the American mainland is by law part of our coastwise trade, and is restricted to vessels under the United States flag.

In 1937 shipments to the United States totaled 1,337,193 short tons and consisted principally of canned pineapple, dried and canned fruits, sugar, and sirup and molasses. In the same year the islands received a total of 770,075 short tons of merchandise including iron and steel, machinery, petroleum products, cement, rice, tea, flour, and lumber.

Passenger service between the Pacific coast and the Hawaiian Islands is handled by two American steamship lines operating from San Francisco and Los Angeles, namely, the Matson Navigation Co., and the American President Lines (successor to the Dollar Steamship Lines). There are two Canadian companies operating from Vancouver and Victoria, British Columbia—the Canadian Pacific Steamships, Ltd., and the Canadian Australasian Line, Ltd. (Union Steamship Co. of New Zealand).

The number of passengers transported between the United States and Hawaii totaled 41,686 in 1937. Of this number, 20,348 passengers arrived in Hawaii and 21,338 departed.

For many years the Matson Navigation Co. has carried a large part of the passenger and freight traffic to and from the islands. The company owns a fleet of 45 vessels, 35 of which were in operation

during the calendar year 1937, including four combination vessels. Two of these combination vessels operate to Australia and New Zealand, with Honolulu as an intermediate stop; the other two operate between San Francisco, Los Angeles, and Honolulu. The freighters connect the islands with Pacific, Gulf, and Atlantic ports.

Inter-Island Steam Navigation Co. handles traffic between the islands. This line owns six steamers, four of which are in regular operation, with two available for contingencies. In recent years a number of outports have been improved and Matson Navigation Co. freighters serve them direct.

The Puerto Rican trade.—Puerto Rico, with a population of 1,723,534 in 1935, is served by six steamship lines operating from the United States. New York & Porto Rico Steamship Co. operates two passenger vessels in weekly service between New York and San Juan; and two additional passenger ships to other Puerto Rican ports. The same company offers freight service from Gulf ports. Bull Insular Lines operate weekly freight and passenger service from Atlantic ports. Lykes Bros. has a freight service four to five times each month from Gulf ports, and the Waterman Line operates freight and passenger services weekly from Florida and Gulf ports. Two intercoastal freight services, American-Hawaiian Steamship Co. and McCormick Steamship Co., also call at Puerto Rico.

In 1937 trade with Puerto Rico totaled 1,500,303 short tons, receipts into continental United States and shipments therefrom amounting to 695,774 tons and 804,529 tons, respectively. The bulk of Puerto Rico's shipments is destined to the Middle Atlantic district of the United States. Sugar is the principal commodity shipped from the island, comprising 71.5 percent of the total tonnage. Other products are canned, dried, and fresh fruits, coffee, tobacco, and tobacco products.

The principal commodities comprising the out-bound traffic to Puerto Rico are fertilizers, nonmetallic minerals, iron and steel manufactures, lumber, rice, cement, machinery, petroleum products, and general merchandise.

In 1937 a total of 30,181 passengers traveled between Puerto Rico and United States ports, principally the port of New York.

The Alaskan trade.—Transportation between the United States and Alaska is preponderantly by steamship. There are no connecting highways and, until recently, no air service; nor is there railroad transportation. All trade, therefore, must move by water between Alaskan seaports, as well as between Alaska and the United States and Canada.

In 1937 the total trade between the United States and Alaska amounted to 614,549 short tons. Commodity movements from Alaska totaled 446,646 tons, consisting principally of canned salmon, frozen halibut and salmon, ore and concentrates, and, in recent years, considerable quantities of spruce lumber. The movement of herring oil and meal is also of increasing importance.

Shipments from the United States to Alaska in 1937 amounted to 167,903 tons and consisted principally of iron and steel manufactures, machinery, foodstuffs, petroleum products, motor vehicles, textiles, and general merchandise.

During 1937 there were 47,694 passengers transported between the United States and Alaska; of this number, 22,796 arrived in Alaska, and 24,898 departed.

Much of the Alaska movement is seasonal. Tourist traffic is of this nature, and is heaviest from June to the middle of September. During the months of April, May, and June there is a large north-bound movement of trap and cannery supplies. The south-bound movement of canned salmon, however, does not start until July and is almost completed by the end of September. In January and February shipping is curtailed, although there is open navigation except to Bering Sea ports. The largest operator, the Alaska Steamship Co., for example, expands its operations from 4 ships in winter to 21 of its own in summer and sometimes charters vessels at the peak season when salmon and herring oil movements are large.

Not only is much of the traffic seasonal but the somewhat hazardous nature of navigation makes operation expensive. Insurance rates are as high as 15 percent on some vessels. Frequent delays occur because of fog and tidal conditions, certain channels being navigable only at favorable stages of the tide.

Labor conditions have added greatly to the cost of operation. In 1937 a widespread strike of cannery workers delayed the beginning of work in many canneries and resulted in plants remaining idle. Labor disputes between steamship lines and various maritime unions have, in the last few years, interfered a number of times with operations, disputes sometimes being forced to a head at the busy season. A peculiarity of the trade is a scarcity and even a complete absence of longshore labor in many Alaskan ports, with the result that cargo is handled largely by ships' crews.

Since the Alaska trade is coastwise, it is therefore presumed to be free from foreign competition. However, as far as passenger business is concerned, Canadian vessels not only offer competition from cities in British Columbia but actually carry a large share of the southeastern Alaska tourist traffic, estimated at 53 percent in 1934, 58 percent in 1935, 62 percent in 1936, 64 percent in 1937, and 69 percent in 1938.

Three lines provide the principal services between the United States and Alaska: the Alaska Transportation Co., the Northland Transportation Co., and the Alaska Steamship Co.

II. HOW IMPORTANT ARE COASTWISE AND INTERCOASTAL SHIPPING TO NATIONAL DEFENSE?

National Defense

The close relationship between our merchant marine and the national defense has been repeatedly stressed in the past and attains new emphasis in the light of the present international situation. In the Merchant Marine Act of 1936 Congress reiterated the policy that an adequate merchant marine was vital to the Nation's welfare. The basic requirements of the Navy Department in this respect are set forth succinctly in the Economic Survey of the American Merchant Marine, dated November 10, 1937, and in the hearings before the Commerce Committee of the United States Senate.[4] Referring to a study prepared for the economic survey, it is found that—

> For basic national-defense purposes, we now have available under the American flag some 1,400 American ships, divided as follows: Approximately 400 in over-

[4] Hearings before the Commerce Committee of the U. S. Senate, pt. 9, S. 3078, 75th Cong., 3d sess., p. 766, et seq.

seas foreign trade; 800 (including 300 tankers) operating coastwise; approximately 200 laid-up ships of usable value.

Hence, we have 1,200 operating plus 200 laid-up ships. Technical military purposes would require immediately 1,000 operating ships, leaving 200 operating and 200 laid-up ships. The Military Establishment would take over practically every one of our ships now operating in overseas foreign trade and 600 of those in the coastwise. In other words, they would take for technical military purposes five-sixths of our present operating fleet, leaving one-sixth as yet untouched for all other needs. Therefore, all of our overseas foreign trade now carried in American bottoms and three-fourths of all trade now carried in our coastwise ships would have to be taken care of some other way.

Thus the domestic fleet would be called upon in the event of a national emergency. During the World War vessels engaged in coastwise and intercoastal commerce played an active role. Immediate availability and freedom from the risk of seizure or internment, enhances the importance of these vessels.

It has been determined that the Navy Department requires vessels of 16½ knots to accompany the fleet, as well as vessels of 12 knots and upward to serve as cargo-carrying adjuncts. The predominant speed of cargo vessels in the coastwise and intercoastal trade is from 10 to 12 knots. In this respect, therefore, the major portion of our domestic fleet does not meet the military qualifications of our national defense.

III. WHAT IS THE PRESENT STATUS OF COASTWISE AND INTERCOASTAL CARRIERS?

The Coastwise and Intercoastal Fleet

[Statistics are as of September 30, 1938]

DRY CARGO

There are 1,420 American steam and motor merchant vessels of all descriptions of 1,000 gross tons or over in the foreign, intercoastal, and coastwise services, aggregating 8,202,369 gross tons. Of this total, 877 vessels, of 4,657,962 gross tons are employed in the intercoastal and coastwise services, comprising 578 dry cargo vessels, of 2,573,610 gross tons and 299 tank vessels of, 2,084,352 gross tons. The 578 dry cargo vessels are distributed as follows: 146, of 860,564 gross tons, in intercoastal service, and 432, of 1,713,046 gross tons, in the coastwise service.

The 146 intercoastal dry cargo vessels include 6 combination freight and passenger vessels, of 47,567 gross tons and 140 freighters, of 812,997 gross tons. One of the combination vessels, of 5,447 gross tons and 14 of the freighters, of 75,970 gross tons are laid up, leaving in active service 131 vessels of both types, totaling 779,147 gross tons.

The 432 coastwise dry cargo vessels consist of 64 combination freight and passenger vessels, of 326,682 gross tons and 368 freighters, of 1,386,364 gross tons. There are 15 combination vessels, of 61,279 gross tons and 101 freighters, of 369,451 gross tons on the inactive list, the remaining active vessels of both types constituting 316, of 1,282,316 gross tons.

TANKERS

Of the 299 tank vessels, 6, of 47,660 gross tons, are in the intercoastal service, and 293, of 2,036,692 gross tons, are in the coastwise service. Thirty-four of the coastwise tankers, aggregating 230,000 gross tons, are on the inactive list.

COMMON, CONTRACT, AND PRIVATE CARRIERS

Common, contract, and private carriers in coastwise and intercoastal trades are defined for the purposes of this survey as follows:

(*a*) Common carrier: A carrier which accepts freight from any shipper, subject only to reasonable restrictions, and operates on regular routes from port to port.

(*b*) Contract carrier: A carrier which accepts freight solely under contract (charter or other agreement).

(*c*) Private carrier: A carrier which only carries freight belonging to owner or charterer of the vessel.

For the most part, dry cargo vessels engaged in coastwise and intercoastal trades are operated as common carriers. Contract or tramp carriers are important, particularly in the Atlantic-Gulf coastwise trade in the movement of such commodities as coal, sulfur, phosphate rock, sand and gravel, and other bulk commodities.

The tanker services are operated almost entirely as private carriers by the oil companies.

There is a limited amount of contract carrying on the Pacific coast. Some lumber is moved along the coast on contract, but most of the former contract lumber schooners have become common carriers in order that they may participate in return loads of general cargo. It is estimated that at one time between three and four hundred of these vessels were in operation on the Pacific coast. Ten years ago this number had decreased to 225, and today the number in commission is between 85 and 90, fewer than two-thirds of which, on the average, were in operation during the past year.

Common carriers predominate in the intercoastal trade. Contract carrying, in the ordinary sense, is not of great importance, although some sulfur west-bound and lumber east-bound are moved under contract. Private carrying likewise is of limited importance in the intercoastal trade and is restricted principally to the transportation of petroleum and petroleum products.

American steam and motor dry-cargo vessels in intercoastal and coastwise service as of Sept. 30, 1938

Type and status	Intercoastal		Coastwise		Total	
	Number	Gross tons	Number	Gross tons	Number	Gross tons
Combination:						
Active	5	42,120	49	265,403	54	307,523
Laid-up	1	5,447	15	61,279	16	66,726
Total	6	47,567	64	326,682	70	374,249
Freight:						
Active	126	737,027	267	1,016,913	393	1,753,940
Laid-up	14	75,970	101	369,451	115	445,421
Total	140	812,997	368	1,386,364	508	2,199,361
All:						
Active	131	779,147	316	1,282,316	447	2,061,463
Laid-up	15	81,417	116	430,730	131	512,147
Total	146	860,564	432	1,713,046	578	2,573,610

American steam and motor tank vessels in intercoastal and coastwise service as of Sept. 30, 1938

Status	Intercoastal		Coastwise		Total	
	Number	Gross tons	Number	Gross tons	Number	Gross tons
Active	6	47,660	259	1,806,692	265	1,854,352
Laid-up			[1] 34	230,000	[1] 34	230,000
Total	6	47,660	293	2,036,692	299	2,084,352

[1] Estimated. Due to shifting of tank vessels from one trade to another as occasion demands, no accurate determination of laid-up tank vessels can be made.

Analysis of Financial Position of Principal Common Carrier Coastwise and Intercoastal Lines as of December 31, 1937

The coastwise and intercoastal merchant fleet must serve the transportation needs of the mainland of the United States, its nearby island possessions, and Alaska and as an auxiliary to the Navy. Revenues must support it, since it is dependent upon private capital. As an arm of defense it must be kept to the standards required by defense policy and plans.

The fleet, considered in this financial analysis, consists of 320 freight vessels of 2,313,800 dead-weight tons and 61 combination freight and passenger vessels of 294,143 gross tons owned or controlled by 42 corporate operators. (These companies comprise the principal common carrier lines filing annual financial reports with the Maritime Commission in accordance with section 21 of the Shipping Act, 1916, and classified as coastwise and intercoastal operators. Companies, part of whose operations are in the coastwise and intercoastal trades but which receive 50 percent or more of their gross revenue from foreign operations, were not included in this analysis. Likewise, companies which have been operating in the trade but a short time were not included.) These operators vary in their efficiency and present financial status, and to avoid distortion arising from these variations they have been segregated for certain analyses into two groups: Group A, the more successful operators; and group B, the marginal and submarginal operators:

Group A.—This group consists of 10 corporations controlling 164 freight vessels of 1,208,830 dead-weight tons and 47 combination freight and passenger vessels of 208,859 gross tons, costing $112,242,879 with a present depreciated or net book value of $47,326,948 and with average annual earnings over the last 10 years of $5,417,737 after depreciation and taxes.

Group B.—This group consists of 32 corporations controlling 156 freight vessels of 1,104,970 dead-weight tons and 14 combination freight and passenger vessels of 85,284 gross tons, costing $59,019,373 with a present depreciated or net book value of $22,891,960 and with an average annual loss over the last 10 years of $1,929,118 after depreciation and taxes.

The value of the fleet as a national asset decreases as the ships become obsolete, and its efficiency for naval requirements is measured in terms of modernity and speed. Schedules 1 1–a 2, and 2–a appendixes 18,

19, 20, and 21, pages 70, 71, 72 and 73, show the distribution of the fleet, by age, tonnage, cost, accrued depreciation, and net book values. Schedules 3 and 3–a, appendixes 22 and 23, page 74, show the distribution of tonnage and the total by speeds. Since the average age of freight vessels of this coastwise and intercoastal fleet is 20 years, and that of the combination freight and passenger vessels, 16½ years, the matter of replacement presents an immediate and pressing problem.

This commercial fleet represents an investment, as per books, of $123,314,120, consisting of capital stock, $110,421,041, and capital surplus, $12,893,078; and is using $19,401,882 of borrowed funds. This investment has been depleted by $7,729,055 [5] operating losses and dividend distributions. During the 10 years ended December 31, 1937, these companies withdrew in dividends from the business $69,126,616 [5] equivalent to an annual return of 5.61 percent on the present combined investment of $123,314,120. The following table gives a clear picture of the service and distribution of these dividends:

For period 1928 to 1937, inclusive	Group A companies	Group B companies	Combined
Net income, after taxes, etc	$54, 177, 377	[1] $19, 291, 184	$34, 886, 193
Depreciation charged	50, 482, 997	26, 067, 450	76, 550, 447
Total	104, 660. 374	6, 776, 266	111, 436, 640
Cash dividends paid	56, 504, 836	12, 621, 780	69, 126, 616
Investment	72, 883, 920	50, 530, 200	123, 314, 120
Percent paid per annum on investment	7. 75	2. 50	5. 61
Percent earned per annum on investment	7. 43	[1] 3. 83	2. 81

[1] Red figures.

The above distribution, even for the better companies, apparently did not reckon on the replacement (as distinguished from recovery) of the earning assets. During the 10-year period ended December 31, 1937, group A companies paid in dividends an amount equivalent to 112 percent of their total accrued depreciation but retained $48,155,541 in the business, which is equivalent to 37 percent of the cost of all physical assets. Group B companies paid in dividends 48 percent of their accrued depreciation and in the process depleted, in effect, their capital in the amount of $5,845,514, leaving nothing for replacements. The following statement of conditions as of December 31, 1937, taken from reports filed with the Maritime Commission by the corporations under review, shows present inability to replace such assets out of reserves even at the cost at which these assets were acquired originally.

[In thousands of dollars]

	Group A companies	Group B companies	Combined
CURRENT ASSETS			
Cash	$9, 836	$2, 911	$12, 747
Special funds	928	304	1, 232
Marketable securities	7, 957	475	8, 432
All other current assets	6, 541	8, 492	15, 033
Total	25, 262	12, 182	37, 444
Less current liabilities	4, 927	8, 912	13, 839
Net current working assets	20, 335	3, 270	23, 605

[5] Combined earned surplus, all companies, is a debit of $529,055 to which has been added $7,200,000, accounts receivable in one company in group B, representing withdrawal by sole stockholder and treated in this report as a dividend disbursement.

[In thousands of dollars]

	Group A companies	Group B companies	Combined
FIXED ASSETS			
Floating equipment	$112,242	$59,019	$171,261
Less depreciation	64,853	36,190	101,042
Net book value	47,390	22,829	70,219
Terminals and other equipment	17,615	18,496	36,111
Less depreciation	6,442	6,453	12,895
Net book value	11,173	12,043	23,216
Total fixed assets	129,857	77,515	207,372
Total depreciation	71,294	42,643	113,937
Net book value of fixed assets	58,563	34,872	93,435
Less long-term debt	3,773	15,629	19,402
Net equity in fixed assets, book value	54,790	19,243	74,033
Insurance funds	2,411	348	2,759
Investments	19,734	17,484	37,218
Other assets less other liabilities	2,795	[1] 18,700	[1] 15,905
Deferred charges less deferred credits	[1] 795	20	[1] 775
Goodwill		1,151	1,151
Total	99,270	22,816	122,086
Less other reserves	5,600	763	6,363
Leaving a net worth, as per books of	93,670	22,053	115,723
Which is represented by—			
Minority interest	138		138
Capital stock	70,873	39,548	110,421
Capital surplus	2,011	10,882	12,893
Earned surplus	20,648	[1] [2] 28,377	[1] 7,729
Total	93,670	22,053	115,723

[1] Red figures.

[2] Combined earned surplus, all companies, is a debit of $529,055 to which has been added $7,200,000, accounts receivable in 1 company in group B, representing withdrawal by sole stockholder and treated in this report as a dividend disbursement.

The flow of funds during the 10 years ended December 31, 1937, is summarized in the following tables:

A and B grouping

	Group A companies	Group B companies	Combined
Sources of cash or its equivalent:			
Net income (after all taxes, depreciation, and other reserves)	$54,177,000	[1] $19,291,000	$34,886,000
Depreciation	50,483,000	26,067,000	76,550,000
Other reserves	8,540,000	2,601,000	11,141,000
Sale of securities	5,858,000	1,922,000	7,780,000
Increase in long-term debt	6,034,000	10,193,000	16,227,000
Total	125,092,000	21,492,000	146,584,000
Cash disbursed:			
Betterments and reconditioning	7,233,000	4,431,000	11,664,000
Additions to equipment and terminals	39,516,000	8,338,000	47,854,000
Long-term debt retirements	7,520,000	15,231,000	22,751,000
Dividends paid	56,505,000	12,622,000	69,127,000
Total	110,774,000	40,622,000	151,396,000
Net increase in cash or its equivalent since Jan. 1, 1928	14,318,000	[1] 19,130,000	[1] 4,812,000

[1] Red figures.

Coastwise, intercoastal, and noncontiguous grouping

	Coastwise	Intercoastal	Noncontiguous	Combined
Sources of cash or its equivalent:				
Net income (after all taxes, depreciation, and other reserves)	$10,739,000	[1] $4,840,000	$28,987,000	$34,886,000
Depreciation	32,392,000	22,964,000	21,194,000	76,550,000
Other reserves	2,685,000	1,035,000	7,421,000	11,141,000
Sale of securities	4,385,000	600,000	2,794,000	7,780,000
Increase in long-term debt	8,915,000	6,112,000	1,200,000	16,227.000
Total	59,116,000	25,871,000	61,596,000	146,584,000
Cash disbursed:				
Betterments and reconditioning	6,849,000	782,000	4,034,000	11,664,000
Additions to equipment and terminals	17,668,000	11,731,000	18,455,000	47,854,000
Long-term debt retirements	13,500,000	8,051,000	1,200,000	22,751,000
Dividends paid	20,859,000	18,825,000	29,443,000	69,127,000
Total	58,876,000	39,389,000	53,132,000	151,396,000
Net increase in cash or its equivalent since Jan. 1, 1928	242,000	[1] 13,517,000	8,464.000	[1] 4,812,000

[1] Red figures.

The advisability of continuing a venture naturally involves the expectation of returns. Schedules 4 and 4–a, appendixes 24 and 25, pages 75, 76, 77 and 78, covering only a 3-year period, do give an indication of what might be expected. While the trend in the 3-year span is significant, the period was characterized by many and—in operating terms and conditions—drastic social and economic adjustments, especially in respect of labor costs.

RETIREMENTS AND REPLACEMENTS

Assuming normal maintenance, the life of a vessel is, for the purpose of this report, determinable within reasonably accurate limits. Such normal life may be shortened by technological developments.

Schedules 1, 1–a, 2, and 2–a, appendixes 18, 19, 20, and 21, pages 70, 71, 72 and 73, classify respectively, freight and combination freight and passenger vessels, by age groups, showing costs, accrued depreciation, net book values, and tonnage. The average age of the coastwise and intercoastal fleets at December 1, 1937, is summarized as follows:

Age	Freight vessels		Combination vessels	
	Deadweight tons	Percent of total	Gross tons	Percent of total
Under 10 years	15,160	0.65	38,787	13.18
10 to 14 years (average, 12 years)	6,967	0.30	140,818	47.87
15 to 19 years (average, 19 years)	1,849,539	79.94	41,906	14.25
20 to 24 years (average, 22 years)	259,342	11.20	22,874	7.77
25 to 29 years (average, 27 years)	110,615	4.78	6,284	2.14
30 years and over	72,177	3.13	43,474	14.79
Total	2,313,800	100.00	294,143	100.00

Assuming an average economically effective age of 25 years, the above table indicates that about 99 percent, or 2,291,673 dead-weight tons, of freight vessels and 39 percent, or 114,538 gross tons, of combination freight and passenger vessels must be replaced within the next 6 years. The greater part of this freight tonnage was a product of the World War and was acquired by the operators at an average price of $40.18 per dead-weight ton. The combination vessels, requiring replacement, cost, per books, on average of $107 per gross ton. Due to the present financial position of the lines this tonnage could not be replaced, even in kind, at the present book cost to the owners without additional capital.

The average speeds of these vessels are summarized in the following table:

Speed	Freight vessels		Combination vessels	
	Dead-weight tons	Percent of total	Gross tons	Percent of total
Under 10 knots	239,963	10.37	20,744	7.05
10 to 12 knots (average, 11 knots)	1,728,855	74.72	31,181	10.60
13 to 14 knots (average, 13½ knots)	318,427	13.76	78,194	26.58
15 to 16 knots (average, 15½ knots)	26,555	1.15	71,743	24.39
17 to 18 knots (average, 17½ knots)			20,066	6.82
19 to 20 knots (average, 19½ knots)			12,418	4.22
Over 20 knots			59,797	20.34
Total	2,313,800	100.00	294,143	100.00

IV. WHAT FACTORS ARE LARGELY RESPONSIBLE FOR THE PRESENT CONDITION OF COASTWISE AND INTERCOASTAL CARRIERS?

Water Rates in Coastwise and Intercoastal Trades

Prior to the enactment of the Shipping Act, 1916, creating the United States Shipping Board, there was no Federal regulation of the port-to-port rates of the intercoastal and coastwise water lines, except that exercised by the Interstate Commerce Commission over the port-to-port rates of certain railroad-owned coastwise lines under the provisions of the Panama Canal Act of 1912.

Regulation of rates under the Shipping Act, 1916, which applied only to common carriers, was weak. Carriers were required to file only maximum rates on 10 days' notice and could charge shippers any rate so long as it was not in excess of the maximum. Carriers were also required to file copies of all rate, service, and traffic agreements with other carriers or persons.

The Intercoastal Shipping Act, 1933, was an outgrowth of the chaotic rate conditions in the intercoastal trade in 1931 and conferred more specific authority upon the Board [6] with respect to intercoastal carriers. This act applies both to common and contract carriers and requires them to file schedules of rates, fares, and charges with the Board and to adhere strictly to such schedules. Changes in rates

[6] The Merchant Marine Act, 1936, approved June 29, 1936, created the United States Maritime Commission and gave to it the powers that had been vested in the Shipping Board and that were transferred to the Shipping Board Bureau of the Department of Commerce in 1933.

cannot become effective earlier than 30 days after filing and posting, except by special permission of the Board. The act added nothing to the Board's powers in respect to minimum rates, but did provide for the suspension of rates. The Shipping Act, 1916, as well as the Intercoastal Shipping Act, continued to apply to intercoastal carriers.

The 1938 amendment to the Intercoastal Act of 1933 authorized the Maritime Commission to prescribe lawful maximum as well as minimum rates in lieu of those found unlawful; and extended the application of the provisions of this act to common carriers operating in the coastwise trade. The charges of contract carriers in coastwise trade are not subject to regulation.

The rates of common carriers by water engaged in interstate transportation under joint through arrangements with rail or motor carriers are subject to an important measure of regulation by the Interstate Commerce Commission.

INTERCOASTAL STEAMSHIP RATES AND RATE POLICIES

With increased competition in the intercoastal trade after the war, it became necessary to stabilize rates to prevent demoralization of the trade. To accomplish this, some of the principal carriers of the trade formed two conferences. The United States Intercoastal Conference, composed of carriers operating between Atlantic and Pacific coast ports; and the Gulf Intercoastal Conference, comprising carriers operating between Gulf of Mexico and Pacific coast ports.

Atlantic-Pacific trade.—The United States Intercoastal Conference was first organized on August 5, 1920. After having gone through several periods of reorganization and disbandment, with attendant rate wars, it was finally dissolved on July 31, 1934. During the time the conference was functioning its members were classified into A and B lines according to the frequency of their vessel operations; the B lines with less frequent service being permitted, under the conference agreement, to charge differentially lower rates than the A line rates.

All of the regularly operated intercoastal common carriers, except one, are members of the Intercoastal Steamship Freight Association, organized on July 17, 1936. Its purpose is to maintain uniform rates. Four of its members are known as A lines and the others as B lines, the latter on a limited number of west-bound commodities being permitted under the conference agreement to charge slightly lower rates than the A lines.

While the largest part of the Atlantic-Pacific intercoastal tonnage originates at or is destined to interior points necessitating a rail or a truck haul before and after transportation by intercoastal vessel, none of the intercoastal water carriers operating in this trade quote joint through rates with either the railroads or motortruck-carrier lines at the present time.

Intercoastal rates between all ports on the Atlantic coast and all ports on the Pacific coast are, generally speaking, the same, i. e., the rates are blanketed. In constructing water rates between the Atlantic coast and Los Angeles, Calif., the intercoastal water carriers must consider the cost to the shipper of moving his cargo a distance of 20 miles from Los Angeles Harbor to Los Angeles. Such cost is

substantial and tends to hold down the intercoastal water rate which would be effective at Los Angeles if there was no railroad competition or if the water carriers served this point directly. In constructing intercoastal rates to and from Pacific coast ports it is customary to apply the Los Angeles rate to all ports north thereof, to and including Puget Sound.

Gulf of Mexico-Pacific coast trade.—The Gulf Intercoastal Conference was formed in 1923 by two of the water lines then operating in the trade and, although it was disbanded on two occasions by disagreements among its member lines, which were followed by rate wars, it is functioning today.

Unlike the United States Intercoastal Conference carriers, members of the Gulf Conference have always maintained uniform rates for all of the lines and have had no pooling of revenue or port equalization arrangements in connection with traffic to or from interior points.

The rates of the Gulf Conference carriers between Gulf of Mexico and Pacific coast ports are generally blanketed at the Pacific coast ports from Los Angeles north to and including Puget Sound ports.

Two of the present member lines of the Gulf Intercoastal Conference have joint rates through New Orleans with rail and barge lines to and from points in the Middle West. Since the establishment of these rates in 1928, competition between Gulf-Pacific and Atlantic-Pacific water lines for intercoastal traffic from and to interior points has been intensified.

Long-and-short-haul relief.—Long-and-short-haul relief as a means of assisting the railroads in competition with the intercoastal water carriers, is not commonly granted by the Interstate Commerce Commission to the transcontinental rail lines. Formerly, such relief was extensively granted, but since 1922 that Commission has authorized fourth-section relief only with respect to a limited number of commodities moving between specified points.

COASTWISE RATES AND RATE POLICIES

Atlantic and Gulf coastwise trade.—Up to the present time the port-to-port rates in the coastwise trade have been established voluntarily by the carriers. Since September 21, 1938, common carriers operating in coastwise trade have been required to file with the Maritime Commission their actual port-to-port rates. Regulation over the rates of the railroad-owned coastwise lines is vested in the Interstate Commerce Commission, which body has jurisdiction over joint rail-water rates and routes.

At the present time, insofar as port-to-port traffic is concerned, four of the common carrier water lines operating between the North Atlantic and South Atlantic ports are associated in the Atlantic Coastwise Steamship Conference and five of the common carrier water lines in the North Atlantic-Gulf routes, including one railroad-owned line, are associated in the North Atlantic Gulf Steamship Association.

The port-to-port charges of contract water carriers in the coastwise trade are not subject to regulation.

The differences between all-rail and all-water or rail-and-water rates may not, in all instances, reflect a proper measure of the variations in the character of rail and water transportation. In notable instances the differentials between the all-water rates and the corre-

sponding all-rail rates have been greatly narrowed or entirely eliminated, as a result of fourth-section relief granted the railroads to meet water competition, causing the water lines serious losses of traffic and revenue. For example: In 1937 there was a coastwise water movement of sugar in lots of 200 tons or more from New York, N. Y., to Norfolk, Va., on which the common carrier port-to-port water rate was 16 cents per 100 pounds, including pick-up at New York and loading into cars and switching at Norfolk, or 15 cents per 100 pounds without these additional terminal services, but including marine insurance. Tramp steamers also carried lots ranging from 200 to 500 tons at rates from 12 to 14 cents per 100 pounds. Upon petition, certain competitive rail carriers were granted fourth-section relief by the Interstate Commerce Commission to publish a carload all-rail rate of 16 cents per 100 pounds for application over rail routes not more than 50 percent circuitious as compared with the direct rail routes between the same points.

The character of water-transportation service is quite different from that of the rail lines, being less costly with much slower transit time. Cargo moving via water routes is subject to physical handling between the ships and various types of transportation vehicles at origin and destination ports which, in some instances, makes it more susceptible to damage than when transported by rail. Water lines generally cannot operate diversion-in-transit, milling-in-transit, and other transit privileges accorded shippers by railroads and many of the lines are not equipped to handle bulk freight. In order to offset their handicaps, and allow them to share properly in the competitive traffic, the water lines must have rates based on adequate differentials under the corresponding all-rail rates. With water rates thus related to the corresponding all-rail rates, the water lines, when confronted with increasing expenses of operation, cannot increase such rates unless the railroad rates are simultaneously raised to insure the maintenance of an adequate spread between the two sets of rates. It is evident, therefore, that the rates of the competitive rail lines constitute the so-called ceiling of rates for the water lines.

Some of the railroads connecting with the coastwise lines are today hostile to the establishment of joint ocean-and-rail rates and, in the hope of discouraging such rates, are demanding excessive divisions, such as their local rates, for their portion of the joint ocean-rail haul between interior points and ports of interchange. This procedure has been detrimental to the water lines although their difficulties in this direction have been somewhat alleviated by the intervention of the Interstate Commerce Commission.

Pacific coastwise trade—The port-to-port rates of common carriers are governed by conference agreements looking to the maintenance of uniform rates. Common-carrier lines operating in Puget Sound are members of the Puget Sound Carriers Conference; common carriers in the Pacific coastwise trade are members of the Pacific Coastwise Conference; and, the Pacific coastwise lumber companies are members of the Pacific Lumber Carriers Association. There is a joint agreement between the last two named conferences.

The port-to-port rates of the common-carrier Pacific coastwise lines have felt the detrimental effects of relief from the long-and-short-haul clause of the Interstate Commerce Act granted to competing rail carriers by the Interstate Commerce Commission.

Intercoastal Steamship Lines and Transcontinental Railroads

The relation between the railroads and the intercoastal steamship lines is twofold in character. Railroads act as feeders of the intercoastal lines, and are also competitors.

The first water route between the Atlantic and Pacific coasts was by means of the lengthy and circuitous passage via Cape Horn, or Magellan. When a railroad was built across the Isthmus of Panama, and later across the Isthmus of Tehuantepec, cheaper and faster routes were established. These routes consisted of steamship lines to the Isthmus of Panama or the Isthmus of Tehuantepec, a short rail haul, and steamship lines to Pacific coast ports of the United States. To meet the competiton of these routes the railroads reduced rates on transcontinental traffic. Competition was further intensified by the opening of the Panama Canal in 1914.

The ability of the railroads to reduce rates to and from the Pacific coast to meet water competition and divert traffic from the intercoastal steamship lines depends in large measure upon their ability to obtain relief from the provisions of the long-and-short-haul clause of the Interstate Commerce Act.

In recent years the Interstate Commerce Commission has granted fourth-section relief to transcontinental rail lines on a limited number of commodities. The extent of the denial of fourth-section relief to the transcontinental railroads, however, has resulted in efforts on the part of the railroads to bring about modification or repeal of section 4, of the Interstate Commerce Act.

Insofar as the railroads are competitors of the steamship lines operating through the Panama Canal a clash of interests occurs.

The steamship lines would like to carry all transcontinental traffic that will not move by rail at normal rail rates. The railroads would like to divert such transcontinental traffic to their lines as they can carry at some profit above the direct or "out-of-pocket" expenses of carrying it. It is important that these conflicts of interests be resolved in the interest of the Nation as a whole, and not solely in the interest of one group or another.

Whether the coast-to-coast traffic of the country shall move by water or by rail will depend largely on the rates charged by the two transportation agencies. There is some traffic which will move by rail, even if the rail rates are not depressed. But there is much traffic that will not move by rail except at a low level of rates. Generally, commodities now moving by water have sought this means of transportation because of its lower rate structure brought about by lower costs of operation.

If transcontinental rail rates are reduced to the level of competing water rates, we are faced with the possibility that the destruction of intercoastal transportation service might eventually deprive the public of low rates between the coasts. If low-cost transportation between the two coasts is possible, because of the existence of the sea route, the people of the United States are entitled to transportation at these low rates. But if the railroads divert a large share of this traffic to their lines, and adequate steamship service is thereby curtailed and shipping facilities are limited, there is the probability that the rail rates would not be continued at their present level.

Moreover, the intercoastal traffic moving through the Panama Canal, if diverted to the rail lines, would not have a very appreciable effect upun their revenues. The seven principal western railroads carried 208,000,000 short tons of revenue freight in 1936 and the intercoastal water lines carried 7,500,000 short tons, so if this latter traffic had moved by these western railroads, they would have increased their revenue tonnage only 3.6 percent.

The eastern railroads, although participating in many joint through transcontinental rates and routes which are competitive with the intercoastal water lines, also haul between the Atlantic ports and inland points a considerable amount of traffic brought to or taken from such ports by these water lines. Eastern railroads generally receive better revenue if these movements are to or from the Atlantic ports in lieu of the all-rail transcontinental movements to or from the Pacific coast. This might also apply to the Mississippi Valley railroads transporting intercoastal traffic between inland points in the valley and the Gulf ports for transportation beyond by ship. It is obvious, therefore, that if the transcontinental all-rail lines succeed in diverting the intercoastal water traffic to themselves, the rail lines operating between inland points and the ports of interchange with the intercoastal water lines would lose their shorter and more remunerative hauls to and from such ports.

Relation Between Atlantic and Gulf Coastwise Steamship Lines, Railroads, and Motortrucks

Coastwise steamship lines serving the Atlantic and Gulf seaboards are important to the rail-transportation system. A map will clearly show that navigation between points along the Atlantic coast and along the Gulf coast, in many instances, is as direct as transportation by land.

The supplementary aspects of this rail-water relationship is sometimes overlooked. To reach inland from these port cities, whether to tap sources of supply or deliver products to markets, transportation connections with water lines are necessary.

That joint rail-water rates are common in the trade under discussion is worthy of note. These arrangements between rail and water are unknown in the intercoastal trade, with the exception of the Gulf-Pacific service. In view of the competition between the rail and water carriers in the Atlantic and Gulf coastwise trades, this feature is particularly significant. In a large sense, therefore, the water carriers and the rail lines, in cooperation, constitute primary routes in the vast transportation net serving much of the territory of the United States east of the Mississippi River, as well as the Southwest.

A large amount of the coastwise traffic to or from outlying portions of the port districts is brought to or taken from the steamship terminals by motortrucks. The truck lines also act as feeders to the coastwise steamship lines to and from a large number of inland ports, sometimes in connection with long hauls. On the other hand, the truck operators assume the role of competitors of the water lines on both short and long hauls, the movement of citrus fruit from Florida to eastern port cities being an example of the latter.

Rate Construction and Fourth-Section Relief

In the construction of railroad freight rates, water competition along the Atlantic and Gulf coasts has long been an important factor. Thus the all-rail rates are lower than they probably would be if water competition were nonexistent. It is possible, of course, for the all-rail rates on competitive commodities to decline to the same level or to a point so slightly above the water rates as to bring about a practical elimination of water competition, particularly when cognizance is taken of the disabilities of water transportation previously cited. When this occurs, it is obvious that there has been an overstepping of the bounds of legitimate competition between carriers that supplement the services of one another, as well as compete, a situation which is illustrated by the recent *Citrus Fruit case*. Here the railroads, desiring to reduce their all-rail rates in order to secure a larger share of the citrus-fruit traffic from Florida origins to North Atlantic ports, petitioned the Interstate Commerce Commission for fourth-section relief at intermediate points to permit them to publish, by way of all-rail routes, carload rates which were the same as the competitive rates by truck from the origin point in Florida to the nearest Florida port, plus the steamship rate beyond. They further requested the Commission to allow them continuing relief, so that, if and when the steamship lines or truck lines reduced their rates, the all-rail rates could be automatically reduced without further application to the Commission. The railroads were granted substantially what they had petitioned for, including the continuing relief, but with the proviso that the carload rates established by them should be no lower than to yield a certain specified per car-mile revenue. Immediately after publication of the reduced rail rates, traffic was heavily diverted from the steamship lines, who claimed that the action of the Interstate Commerce Commission had put them in a "strait jacket" as far as competition was concerned.

In view of the severe competition between rail and water lines in the trade under discussion, it is to be expected that rail lines would seek extensive fourth-section relief.

According to Commissioner Joseph B. Eastman, the Interstate Commerce Commission has been liberal in granting fourth-section relief to enable the railroads to compete with water carriers.[7] In connection with the present survey, 28 recent and pertinent fourth-section decisions of the Interstate Commerce Commission were examined. Of this total, 25 decisions granted relief wholly or in part and in only three instances was relief entirely refused. It would seem from these facts that the Interstate Commerce Commission had adopted a liberal policy toward the rail lines in their efforts to capture certain items of traffic moving in Atlantic and Gulf coastwise trade. Such relief from the operation of the fourth section, in addition to the adjustment of railroad rates on many competitive products at low levels quite apart from fourth-section relief, has strengthened the competitive position of the rail lines.

[7] Hearings before the Committee on Interstate Commerce, U. S. Senate, 75th Congress, 3d sess., on S. 1356 and H. R. 1668, February 24 and April 12, 1938, on Long-and-Short-Haul Charges, p. 802.

While the Interstate Commerce Commission has been liberal in granting fourth-section relief to rail carriers in this territory, that Commission has also indirectly benefited water lines when it has prescribed joint rail-and-water rates. As party to such joint arrangements, water carriers share in the benefits accruing to both agencies, but the water carriers complain that in many instances their share of the joint rate is disproportionately small.

It is axiomatic that both the railroads and water carriers are essential in the transportation structure in the territory generally east of the Mississippi River and in the Southwest. Jointly and severally they carry the traffic in an economic area in which the volume of business transacted is probably as great as that of any area of equal extent located elsewhere in the world. Due to the ramifications of the economy in this region, many classes of traffic move in full carload and shipload lots. Every conceivable type of ocean-going carrier, including general-cargo vessels, bulk-freight vessels, tankers, and other specialized equipment, ply the Atlantic and Gulf coast waters, while the railroads operating to and from the seaboards, connecting as they do with the water lines, extend the economies of water transportation to the hinterland. Both types of carriers have been operating for generations; both have legitimate functions; both are necessary to the national economy. It should also be borne in mind that the coastwise water lines existed long before the railroads and were important factors in the development of that section of the country served by them. These carriers are essential to the national transportation structure.

Relation Between the Pacific Coastwise Steamship Lines, Railroads, and Motortrucks

On the Pacific, coast rates have been reduced by the rail lines to meet truck competition, and this lowered rail rate "ceiling" has been reflected in corresponding reductions in steamship rates, thus further tending to decrease the water lines' revenue. Such reductions have apparently had the sanction of regulatory bodies. The revenue of the Pacific coast water carriers is likely to be affected further by a proposal of the rail lines to establish bulk rates on lumber and lumber products from points in Oregon and Washington to points in California on a per-thousand-feet basis, in lieu of the long-established weight basis. Pacific coast interests point out that these proposed bulk rates are wrong in principle; discriminatory and detrimental to sawmills located at tidewater, lacking adequate rail facilities and depending largely on water transportation; and will disrupt water-rate stabilization not only in the case of lumber but also general cargo.

In connection with a fourth-section order of July 10, 1930, the Interstate Commerce Commission granted certain Pacific coast rail lines authority to maintain between San Francisco, Los Angeles, Portland, Seattle, and other Pacific coast ports class rates and carload commodity rates lower than to their intermediate inland points for the purpose of competing with common carrier steamship lines operating between the same ports. One of the conditions imposed by the Interstate Commerce Commission in granting this relief from the long-and-short-haul clause required the port-to-port rates of the competitive rail lines to be not less than certain specified amounts over the

rates of the common carrier steamship line publishing the lowest water rates. These differentials on a long list of commodities ranged from 3 to 18 cents, and on the class rates varied from 9 cents on the lower classes to 15 cents on first class, the class rate differential to govern where no specific differential was fixed. Another condition provided that the rail rates on commodities authorized between the ports should be no lower than to yield certain specified per-ton-mile revenue.

There were three common carrier steamship lines in operation at the time the order was issued, one of which charged slightly higher port-to-port rates than the others because of its faster and, therefore, superior service. The provision that the rail rates authorized between the ports should be no lower than certain specified amounts over the rates of the common carrier steamship line publishing the lowest water rates had the most marked effect upon the steamship line offering the superior service. The Interstate Commerce Commission's order resulted in the diversion of a considerable portion of the port-to-port water traffic to the competing rail lines, which was claimed to be a factor contributing to the failure of two of the steamship lines.

The order of July 10, 1930, has been amended from time to time to extend the long-and-short-haul relief to additional points, and it remains in effect today. This relief appears to have more severely affected the Pacific coast water carriers than any general long-and short-haul relief given by the Interstate Commerce Commission to the rail lines competing with the Atlantic coastwise water carriers. Certain shippers of the Pacific coast region, adversely affected, have strongly opposed the 1930 order but have not been successful in having it rescinded or modified to accord properly with their interests.

What has already been said of the relations between motortruck lines and the Atlantic and Gulf coastwise steamship lines is generally true of the Pacific coast situation.

Labor

Maritime labor conditions were much improved during the period that extended from the completion of the Economic Survey of the American Merchant Marine (November 1937) to the present study of coastwise and intercoastal shipping. The tendency was more and more toward a settlement of disputes or grievances through discussions rather than by drastic measures. Many of the objectives that labor had sought for a period of years appear to have been achieved, although from its point of view there is much to be obtained. Shipowners, in general, are agreed that labor conditions in their industry seem to be more stable. As evidence of this fact, practically all the agreements signed a year ago on the west coast have been renewed. On the east coast agreements between shipowners and the longshoremen and unlicensed seamen's unions were signed to be effective for 1 year. The agreement signed between the shipowner's group and the National Maritime Union of America affects approximately 20,000 seamen engaged in coastwise and intercoastal shipping. The common-sense attitude displayed by both the ship operators and maritime labor during the past year in the settlement of their disputes is to be commended.

Labor has gained a great deal. Wage rates have been increased. Working hours have been limited to 8 hours per day for unlicensed

seamen. Longshoremen on the Atlantic coast now work a maximum of 8 hours a day and 44 hours a week on a straight-time basis. On the Pacific coast, a maximum of 6 hours per day and a 30-hour week, averaged over a 4-week period, on a straight-time basis, prevails. Working conditions have been improved. Housing and subsistence aboard ships have been bettered in many instances. Machinery is gradually being developed for the discussion and mediation of grievances that naturally arise where two parties to an agreement are concerned.

WAGES

Wage rates of the able seamen, which have been used as a standard of measurement, increased approximately 45 percent in 1938 over those of 1933. Scales of wage rates have been adjusted upward where extraordinary conditions prevail or where special types of work have to be performed. Overtime rates have also increased materially.

What have these wage increases meant to the shipowners? For the 4-year period from 1934 to 1937, 19 steamship companies have submitted data to the Maritime Commission in connection with the present study on coastwise and intercoastal shipping which show that wages paid to seamen for straight time and overtime have increased for all companies. The smallest increase noted was 11 percent, while the largest was 156 percent. If the total wages paid out by these 19 companies for straight time and overtime in 1934 were compared with wages paid out in 1937, the unweighted increase would amount to about 40 percent.

During the same period, wages for straight time and overtime paid out to longshoremen by 28 steamship companies also increased, ranging from 23 to 194 percent. Total wages paid out in 1937 by those companies compared with wages paid out in 1934 showed an unweighted increase of 62 percent.

Except for the abnormal emergency periods during and immediately following the World War, maritime labor today is receiving the highest wage rates in its history.

Hourly and monthly wage rates, however, indicate little if there are not enough jobs to give seamen and longshoremen steady employment. High wage rates are not synonymous, in many instances, with a high yearly income. A seaman or longshoreman who works intermittently throughout the year may receive a yearly income that under no circumstances could adequately feed, clothe, and shelter him. These are basic necessities and do not include those other needs for which the average worker today must provide himself. An analysis of real wages cannot be made unless more is known about the factors affecting this subject. While data are not available on the average yearly working period of unlicensed seamen in the coastwise and intercoastal trades, a rough estimate would seem to indicate that these men average about 8 to 10 months' work a year on board vessels engaged in domestic shipping.

CREW'S QUARTERS

Crew's quarters on board vessels operating in coastwise and intercoastal shipping leave much to be desired. Members of the Commission's staff examined crew's quarters in many ships engaged in coast-

wise, intercoastal, and foreign trades. They consulted unlicensed seamen, as well as licensed officers, regarding these conditions. Most of the ships are so old and their forecastles are so cramped that not a great deal can be done to better living conditions. Many shipowners, however, recognizing existing conditions, have undertaken to improve the vessels they operate. Many unsanitary conditions have been eliminated.

It is significant, however, that seamen, on the whole, realize the problems of reconditioning and bettering their living quarters.

SHIPOWNERS' PROBLEMS

Existing wage rates have meant increased operating costs to shipowners, particularly to companies operating in the Pacific coastwise trade. In some instances the proportion of wages paid out to total vessel operating expenses is as much as 30 percent. One of the outstanding grievances voiced by shipowners is the increasing complexity in determining and administering overtime regulations. They complain that such regulations have a tendency to evoke endless disputes, interfering with the operation of the vessel, encourage inefficiency, and to break down discipline by "injecting outside interference between the men and the lawful authority of the vessels."

Factionalism within labor's ranks is a disturbing and disquieting factor. The steamship operator must inevitably weigh the worth of an agreement signed with one union as opposed to the demands of another. Clearly, it is for the best interests of labor, shipowners, and the general public to have a merchant marine free from internal strife.

HOW LABOR CAN COOPERATE TO BRING ABOUT MORE STABLE CONDITIONS IN THE DOMESTIC SHIPPING INDUSTRY

While complete data are not at present available, the best estimates indicate that on June 30, 1937, in the intercoastal trade a minimum of 9,700 seamen were employed on 165 vessels then in operation, which included practically the entire fleet. At least 19,500 seamen were employed on 571 vessels of 1,000 gross tons and over, operating at that time in the coastwise trade.

Maritime labor has every right to expect fair wages; decent working conditions; good food and living quarters; fair adjustment of their grievances; effective machinery for the mediation and arbitration of whatever disputes arise, during the period in which an agreement is in force, between labor and shipowners. These objectives can best be obtained through collective bargaining.

The following summary suggests what labor could do to cooperate with shipowners and the Government in helping to create more stable conditions in the domestic shipping industry.

1. Labor should settle their factional differences. Since labor has many objectives still to be obtained it should present a common responsible front if it hopes to achieve effective collective bargaining. Maritime labor and shipowners should each form its own strong, united group without the limitations of geographic differences and types of trade (foreign, intercoastal, coastwise), to deal with one another.

2. Labor should abide by signed agreements.

3. Labor should recognize the problems of the shipowners.

4. Every effort should be made to increase the efficiency of longshoremen and seamen. In addition, the unlicensed seamen's unions should stress the necessity for discipline on the part of their members. Lack of discipline by seamen while on board ship cannot be tolerated.

5. The complex features of overtime regulations should be simplified.

HOW SHIPOWNERS CAN COOPERATE TO BRING ABOUT MORE STABLE CONDITIONS IN THE DOMESTIC SHIPPING INDUSTRY

Much that has happened in the past few years, as far as labor conditions in the shipping industry are concerned, has been due to the attitude of the shipowners themselves. The steamship companies, however, have every right to expect from labor "loyalty and a fair day's work in return for good wages, good food, good housing and fair treatment." In order to achieve this end they have definite responsibilities:

1. Personnel management conditions in the shipping industry are years behind other industries. Steamship companies should make a sincere effort to install modern personnel management methods. The need for this cannot be stressed too strongly. A recent study [8] of seamen employed on a number of vessels in intercoastal trade under shipping articles of varying duration, suggests the need for a careful study of employment methods prevailng in the industry. Employment of seamen under shipping articles is archaic, and is not consistent with modern personnel management. An examination of the table following this page shows that of a total of 7,798 unlicensed seamen who were employed under shipping articles on 158 vessels in 1937, 5,845 or 75 percent signed for less than 3 months' duration.

Number of seamen employed on 158 vessels in intercoastal trade under shipping articles of varying duration June 30, 1937

Duration	Total	Licensed [1]				Unlicensed			
		Total	Passenger [2]	Freight [3]	Tankers [4]	Total	Passenger [2]	Freight [3]	Tankers [4]
Total	9,335	1,537	97	1,307	133	7,798	1,322	5,955	521
3 weeks and less than 1 month	60	16			16	44			44
1 month and less than 2 months	1,817	189	87	28	74	1,628	1,267	107	254
2 months and less than 3 months	5,114	941		914	27	4,173		4,036	137
3 months and less than 6 months	2,309	383	10	357	16	1,926	55	1,785	86
Over 6 months	35	8		8		27		27	

[1] Exclusive of masters.
[2] 7 vessels.
[3] 135 vessels.
[4] 16 vessels.

NOTE.—It should be noted that the above table does not mean that, for example, 5,114 men actually worked 2 months and less than 3 months, but means that 5,114 men signed on shipping articles of 2 to 3 months' duration.

Source: Shipping Articles current on June 30, 1937. Prepared by U. S. Maritime Commission, Division of Research, occupational research project. All figures subject to revision.

[8] Number of Seamen Employed on 158 Vessels in Intercoastal Trade Under Shipping Articles of Varying Duration, June 30, 1937, prepared by the U. S. Maritime Commission, Division of Research, occupational research project.

2. Crew's quarters on board vessels engaged in coastwise and intercoastal trade leave much to be desired. Every effort should be made to improve these conditions as far as practicable.

3. Steamship companies should take part in studying the problem of reducing the enormous rate of turn-over in maritime labor now prevalent in the shipping industry. This is a function that should properly be handled by a personnel division as referred to in point 1.

HOW THE FEDERAL GOVERNMENT CAN COOPERATE TO BRING ABOUT MORE STABLE CONDITIONS IN THE DOMESTIC SHIPPING INDUSTRY

Several of the 1938 amendments of the Merchant Marine Act, 1936, pertain directly to maritime labor. One amendment dealt with the establishment of a Maritime Labor Board; another with the establishment of training schools for licensed and unlicensed personnel on American merchant vessels. A study entitled "Report to Congress on Training Merchant Marine Personnel" has been prepared by the Maritime Commission and submitted to the Congress in connection with this latter amendment.

In establishing the Maritime Labor Board, provision was specifically made not to infringe upon or limit in any way the National Labor Relations Act. The consensus among shipowners appears to be that elections held under the auspices of the National Labor Relations Board to determine the bargaining representatives of the unlicensed personnel have resulted in less interruption of work, as well as fewer strikes and tie-ups.

While labor conditions in the domestic shipping industry have shown improvement during the past year, it is necessary that every effort should be made by shipowners and labor to maintain the present trend.

The scope of maritime labor relations transcends individual group opinions. Labor, shipowners, the Government, each has to contribute its fair share in bringing about a better understanding in this field. Then, and only then, can we have a domestic and foreign merchant marine worthy of the name.

Cargo Handling

Apart from capital charges, cargo-handling costs are the largest single expense item in the operation of a vessel, approximating over one-third of total operating costs; and if the capital charges of a vessel for the time it is at terminals are added, the cargo-handling factor assumes an even larger proportion of total costs. This estimate does not take into consideration the operating expenses of vessels while in port. Since American ships are handicapped because of high construction and high labor costs, cargo-handling charges are doubly important.

With the large increase in cargo-handling charges in the past few years, and with increased volume of traffic, this factor has become of even greater importance than in the past. One large intercoastal operator's cargo-handling expenses have increased 64 percent in the past 5 years; and a 5-percent reduction in this item in 1937 would have saved over $88,000 more than a 5-percent reduction effected in 1933.

Analysis of cargo-handling features of present coastwise and intercoastal ships and terminals, and of mechanical cargo-handling equipment on terminals, discloses many opportunities for reduction of these

costs. Still larger economies are possible in new ships designed in accordance with the best plans for economical cargo handling and stowage.

Efficient cargo-handling facilities on shipboard include the arrangement of masts, booms, decks, hatches, hatch covers, side ports, etc. For example, four masts, one at each end of each well deck, are preferable to two masts, to facilitate carrying of deckloads of lumber, particularly in intercoastal trade. Long booms to handle lumber and steel efficiently are also recommended. A study of the vessel data, supplied by shipping companies in connection with this survey, shows that the maximum length of booms used by any line is 70 feet. Some ships have booms only 42 to 52 feet long. This results in higher charges for handling and it also increases the port time of a ship. Deck arrangements should permit carrying deckloads; and winches should be placed on raised platforms to facilitate the handling of deck cargo. The design of hatches and hatch covers should likewise take into account the handling of lumber and steel in the intercoastal trade.

Side ports are essential to provide sufficient cargo openings to discharge or load a ship in comparatively short time. This is particularly important with regard to coastwise trade, where much cargo is handled in this manner. A number of Atlantic and Gulf coastwise lines are operating vessels without side ports, although they could be used advantageously. Some of the lines studied in the survey recommend side ports for new vessels to be constructed for the coastwise trade. Cargo elevators provide the best method of handling from deck to deck. Ships operating in the coastwise and intercoastal trades provided with side ports should be equipped with double elevators in each hatch to serve the lower decks and the lower hold, with the exception of such hatches as may be needed for long lengths and large bulky packages. This permits direct movement of trailers from the terminal through the side port onto the elevators and down to the proper decks with the minimum of delay and damage to cargo. Double elevators make it possible for loaded trailers to go down the hatch and empty trailers or trailers loaded with cargo being discharged, to come up the hatch on the other elevator. There is less damage to cargo than when loads are hoisted through the hatch because there is no danger of cargo being accidentally dropped.

Cargo-handling operations on coastwise lines are much the same as loading and unloading of cars at railroad terminals. However, the wage scale is higher than that prevailing among railroad freight handlers and carloaders, but it is lower than for intercoastal ship workers, due largely to the greater frequency of sailings.

Cargo-handling efficiency may be increased still further by means of terminals better designed for the economical handling of cargo and by making inexpensive alterations in terminals now used. Many terminals utilized by coastwise and intercoastal vessels are not planned in accordance with the best cargo-handling practice. For example, a terminal constructed only a few years ago was advertised as a "rail to keel terminal," although no shipside tracks were provided.

One handicap to progress in cargo-handling features at present is the difference in construction and equipment of ships. Some have long booms and others short booms. The same diversity is true of hatches, hatch covers, stanchions, and other features. These defects reduce the efficiency of the cargo-handling operations, which could be

overcome, in large measure, in new ships. While standardization of cargo handling and methods is not feasible because of various classes of cargo, types of ships, and terminals, details can be standardized. In the coastwise and intercoastal trades, economies may be effected at many terminals by standardization of such details as trailer couplers, or types of slings for handling various kinds of cargoes, in spite of differences in terminal design.

In considering the introduction of modern cargo-handling equipment and methods at terminals, the opposition of longshore labor cannot be overlooked. Labor conditions make it more difficult to install mechanical equipment than was true a few years ago; nevertheless, such equipment is still being installed. One difficulty is that contracting stevedores hesitate to buy costly equipment when work is handled on a yearly contract basis rather than for longer periods. Another reason why progress in cargo handling has not been faster is the restricted point of view of so many men responsible for cargo handling and the lack of interchange of information and ideas, as is the case in naval architecture and marine engineering. Another factor is the defiant attitude of terminal superintendents or others who use the equipment. The best equipment in the world will fail if such defiance of efficient operation is permitted.

However, in the coastwise and intercoastal trades there are many examples of large economies effected by the modernization of cargo-handling facilities and methods. It is reasonable, on the basis of these facts, to estimate that a new vessel designed for more economical handling and carrying of cargo, operating to and from modern terminals which utilize the most economical cargo-handling equipment and methods, may cut present costs and reduce the port time of the ship by as much as 10 percent.

V. HOW CAN THESE CONDITIONS BE IMPROVED?

Conclusions and Recommendations

CONCLUSIONS

An analysis of the data developed in connection with the survey points to a number of major factors which have contributed primarily to the aggregate low net earnings of coastwise and intercoastal carriers during the last decade, and to their inability to replace their rapidly aging ships. The future of many of the existing lines is jeopardized by the fact that while they have insufficient funds for replacements at the present time, the advanced age of their vessels, together with the high cost of new construction and increasing costs of operation, indicate that there is but little hope for future progress unless there is a marked change in certain basic problems which confront the industry.

Increased revenues, lower costs of operation, materially lowered construction costs, better labor relations, and improved general economic conditions are necessary if the major part of the companies in the coastwise and intercoastal trades are to make needed replace-

ments from their own resources. The facts point to the further conclusion that, if in the public interest, newer, faster, and more efficient vessels for use as naval auxiliaries are needed, the Government will have to aid in their construction in some manner.

The major factors which have contributed to the present difficulties of the coastwise and intercoastal lines may be classified under the following heads: (1) Increased operating expenses; (2) inequitable competition; (3) insufficient net revenues to meet capital charges, depreciation, and provide reserves for replacements; and (4) unfavorable economic conditions.

(1) Operating expenses have advanced materially in the coastwise and intercoastal trades in recent years, due primarily to the following factors: (*a*) A substantial increase in the cost of handling cargo at terminals; (*b*) increased wage rates for straight time and overtime work; (*c*) inefficient cargo handling equipment and methods which are still employed by some of the domestic shipping companies; (*d*) substantial increases in the cost of fuel, supplies, repairs, etc. As measured on the basis of "per mile traveled," ship-repair costs increased 44 percent, fuel 22 percent, and all other costs, including supplies, 18 percent, during the period 1935–37.

(2) With few exceptions, there have been practically no vessels constructed for the coastwise and intercoastal trades subsequent to the completion of the Government's war-built fleet. This has resulted in part from the fact that operators in these trades were able to acquire vessels from the Government at costs far lower than the cost of new construction. From 1921 to date the Government has from time to time offered its vessels for sale under fluctuating policies and at varying prices. For example, in the period from January 1, 1922, to August 30, 1934, 71 vessels were sold at an average price of $20.98 per ton. These 71 vessels were built during the war period at a cost of approximately $200 per ton. As a result, there has been a fairly constant influx of war-built tonnage into the domestic trades. The general situation has been further complicated by wide disparity in the capital costs of these vessels to their respective owners.

The original introduction of these ships into the domestic shipping industry led to overtonnage of the trade and resulted in rate wars and consequent unstable rate conditions.

There has been in the past, and exists today, uneconomic competition between the railroads and the coastwise and intercoastal water lines. The railroads have from time to time applied to the Interstate Commerce Commission for drastic fourth-section relief, asking for reductions of rates between water-competitive points while maintaining higher rates between inland points, and in many instances have been granted such relief. Rail-rate reductions which followed have, in many cases, generally had an adverse effect upon the corresponding water-rate structure, causing its decline.

Opposition from certain rail lines has retarded the establishment of joint rail-and-water rates and has prevented the water lines from hauling traffic in which they are justly entitled to participate. Shippers and receivers of freight should not be deprived of their right to obtain the benefits of the most economical means of transportation.

(3) The financial analysis indicates that many of the steamship companies considered in this survey received insufficient net revenues to meet capital charges, depreciation, and to provide reserves for

replacements. In certain instances this condition may be due to relative inefficiency of operation and the management policies of some of the companies. It is further noted in this connection that the management of some of the companies has indulged in unsound financial practices. The analysis shows in repeated instances that dividends have been declared without any provisions for the replacement of the fleet.

Reference is again made to low freight rates; keen competitive conditions within the industry itself, as well as from the railroads and motortruck lines; and increasing operating expenses, particularly labor costs, all of which may be considered as contributing factors to the insufficient net revenues received by many of the companies.

(4) Unfavorable economic conditions, in general, during the past decade, severely affected the maritime industry. As an integral part of the Nation's distributive system this industry, as well as the entire transportation industry, suffered from a curtailment in revenue. As a result of general depressed economic conditions along with those factors mentioned above, many domestic steamship companies experienced great difficulty in operating their lines on a profitable basis.

Construction of new vessels during the last decade, in instances where the companies were financially able to build, has been discouraged in part by uncertainty as to disposition of laid-up Government tonnage. A shipowner would not be inclined to contract for new vessels when he and other competing owners could acquire second-hand tonnage from the Government at lower costs. The financial analysis indicates that the coastwise and intercoastal lines with few exceptions are unable to undertake building programs for replacement.

Stimulation of a substantial replacement program depends on—

1. New capital for building through a Government-sponsored "trade-in-build" program.
2. Removal of threat of Government-owned tonnage.
3. Improved labor conditions.
4. More efficient management.
5. Increased revenues due to increased volume or higher rates or both.
6. Reduced operating costs.
7. More efficient cargo-handling equipment, both on ships and at terminals.
8. Better cooperation between the water lines and the railroads.
9. New tonnage at costs per ton lower than those obtaining today.

RECOMMENDATIONS

The Commission recommends adoption of a program containing these two essential points:

1. The acceptance of American-owned old (17 years) or obsolete tonnage by the Commission at its fair and reasonable market value as a credit against new construction; and
2. The sterilization of such "turned-in" tonnage to prevent any future commercial use of it, except in the event of a national emergency.

These recommendations are closely related to the Commission's major task of rebuilding the merchant marine in accordance with the

requirements of our commerce and national defense. A rebuilding program based on the ability of essential foreign-trade routes to absorb new tonnage would fall somewhat short of the needs of national defense. There are 153 ships in the subsidized fleet, of which 133 would be at least 20 years old in 1942. Replacement of this entire fleet would give us only an equal number of new and modern ships. Construction of new tonnage for the lines at present operated by the Government and for those essential routes not covered by any American flag service at this time would not swell the total much beyond 200. It is imperative, therefore, that American operators in the domestic and foreign trade be encouraged to participate in the program for the replacement of their old tonnage.

The Commission urges consideration of the following reasons in support of this program:

I

The acceptance of American-owned old (17 years) or obsolete tonnage by the Commission at its fair and reasonable market value as a credit against new construction.—(*a*) Under this proposal existing combination and cargo tonnage in the coastwise, intercoastal, and foreign commerce of the United States (including foreign-flag tonnage) which has been continuously owned by a citizen or citizens of the United States for a period of at least 3 years, immediately prior to the date of acceptance by the Commission, could be traded in, in connection with new American construction. The inclusion of foreign-flag tonnage owned and operated by American citizens is advanced as an inducement to American citizens to return to American-flag operations, and as a stimulant to American vessel construction by the withdrawal from active service of old or obsolete tonnage. The requirement of 3 years' ownership eliminates the possibility of purchasing tonnage in the American or world markets for the express purpose of trading it in to the Commission.

The program embraces both dry and tank cargo vessels. Tankers are operated as industrial or contract carriers rather than common carriers. Although the owners of these vessels have demonstrated their ability to make needed replacements to a far greater extent than other branches of the merchant marine, they should be treated on the same basis.

(*b*) The credit on tonnage traded in would be granted and applied by the Commission only toward defraying the cost of new construction approved by the Commission. Replacement, under the plan, should be on a substantially equivalent "ship for ship" basis, except that the Commission in its discretion may allow up to a maximum of 3-to-1 ratio of gross tonnage turned in, to tonnage of replacement, if the Commission finds that the replacement ships will provide equivalent or greater utility value with a lesser number of vessels.

(*c*) The fair and reasonable value to be accepted by the owner as the trade-in credit would be determined by the Commission (as of the date the contract is signed for new construction) after considering and evaluating (1) the scrap value, both American and foreign; (2) the depreciated value based on a 20-year life; (3) the market value for operation in the world trade, or in the foreign or domestic trade of the United States.

(*d*) If the trade-in price offered by the Commission is not accepted by the owner of the vessel, he would still be free to sell, scrap, or make such other disposition of his vessel in the domestic market as he might choose. He would not be permitted to make a sale alien without the consent of the Commission as provided for in section 9 of the Shipping Act, 1916, as amended by Public, No. 705, Seventy-fifth Congress, third session, approved June 23, 1938.

(*e*) If the trade-in allowance offered by the Commission is satisfactory, the owner would then enter into an agreement with the Commission pursuant to legislation which would contemplate (1) that the trade-in credit would be applied directly by the Commission only against the construction cost of a vessel whose type and characteristics are satisfactory to the Commission; (2) that the trade-in credit and the application of all proceeds thereof would be exempt from all Federal taxes; (3) a detailed report of all transactions consummated under the trade-in provisions hereof would be reported at the beginning of each session thereof to Congress.

II

The sterilization of such traded-in tonnage to prevent any future commercial use of it, except in the event of a national emergency.—It has been pointed out above that there are only 153 ships in the subsidized fleet. The possibility that these will find their way into intercoastal and coastwise operations is a serious threat. There is a strong feeling in the industry that no new construction will be undertaken while the possibility of such a threat remains, or the possibility of the sale of additional units of the Government's laid-up fleet for intercoastal and coastwise operation.

If the trade-in program is to be carried out with any degree of effectiveness the Government must go beyond a mere announcement of policy. Therefore, the legislation should provide that no vessel acquired by the Commission under the program herein recommended or any vessel in the laid-up fleet, would be sold or chartered by the Commission for operation in the coastwise or intercoastal trades.

III

The Commission is opposed to a number of suggestions which have been offered to provide assistance for coastwise and intercoastal steamship operations:

1. *Any form of construction or operating subsidy.*—The former chairman of the Commission in an address at the Bohemian Club, San Francisco, Calif., in January 1938 made the following observations:

> Although direct grants have been given in the past [as witness the railroads], and although indirect aid is rendered today [such as highway development], the cash support of one form of transportation at the expense of others is an exceedingly ticklish proposition. I do not say that it hasn't been done, or that it can't be done. I want to emphasize, however, that such a course should not be undertaken without careful scrutiny of the objectives to be attained and possible repercussions upon other segments of the national economy.
>
> Few nations have found it expedient to subsidize coastwise-shipping service. The French Government grants aid to trans-Mediterranean services as a matter of colonial policy. Norway and Brazil support coastal shipping as a means of national integration, due to the poor quality of land communications. Neither of these considerations applies to the United States.
>
> It should be pointed out that our coastal and intercoastal trade has been barred to foreign vessels for more than a century. No other American industry, to my

knowledge, is favored with an embargo against foreign competition. Furthermore, domestic operators, like those engaged in foreign trade, are eligible for construction loans at low rates of interest. We must be very sure where we are going before we attempt to add cash grants to the advantages already enjoyed by ship operators in the domestic trades.

Subsidizing one operator, or group of operators, immediately raised the question of what to do about the others. It would be manifestly unfair to assist one or two of the intercoastal lines and not extend the same treatment to all other operators in the trade. One of the largest intercoastal operators, as a matter of fact, has just protested to Congress against any attempt to subsidize intercoastal services. Subsidized vessels monopolize the high-pay freight, he declared, to the detriment of those lines operating without Government assistance. Furthermore, once we establish the principle of support for intercoastal lines, there is no logical reason why the procedure should not be extended to the coastwise lines.

The Commission gave full consideration to this question and its implications when the McAdoo resolution (S. J. Res. 272) received the consideration of Congress in 1938. The Commission opposed the policy expressed in that joint resolution. The President likewise indicated in a letter to Senator McAdoo that this contemplated legislation would not receive his approval. There has been nothing subsequent to justify the Commission in changing its position.

2. *Certificates of convenience and necessity.*—The Commission is opposed to any system requiring the issuance of certificates of convenience and necessity. It believes that such a system would be too rigid, would stifle competition, and would be cumbersome to administer. Furthermore, shifts in the areas of production, both agricultural and industrial, create changing transportation needs with which the slow and lagging system of issuing certificates might never keep pace in the public interest. Vessel and railroad operations are not analogous, the former being more flexible than the latter.

3. *Rate structures.*—Although the level of the existing rate structures of the domestic water carriers offers a serious problem, the Commission does not believe it due to inadequate governmental regulatory powers.

4. *Panama Canal.*—There has been much discussion of the advisability of eliminating Panama Canal tolls as an aid to our intercoastal shipping. Such a bill (S. 3032) to amend the Panama Canal Act of 1912, was introduced in the Senate on November 22, 1937. In the fiscal year ending June 30, 1936, which is considered the last normal year for Canal traffic, the total net tonnage of ships transiting the Panama Canal was 28,024,000 net tons on which tolls aggregating $23,479,000 were paid. Of this total, the intercoastal traffic represented 9,252,000 net tons on which tolls of $7,735,000 were paid. Stated otherwise, the intercoastal traffic of 1936 constituted 33.02 percent of all net tonnage and 32.94 percent of the total of all tolls received. The estimate for the year 1938 was approximately the same. These figures include all intercoastal vessels. The issues raised by the above bill were discussed both in and out of Congress for some period of time. Various agencies of the Government were asked to report on the bill as well as its companion H. R. 8482. Secretary Hull concluded his report with the sentence: "It would be unfortunate should the question be reopened at this time." The Secretary of War, charged with the major responsibility for the Canal, opposed the legislation on the following bases:

(1) Its enactment would violate existing legislative and administrative policy placing the Canal on a self-supporting basis. Toll rates applicable to all commercial vessels as authorized by the act approved August 24, 1937, have been fixed

effective March 1, 1938, on a basis to accomplish this result. The proposed plan would reduce toll collections about $7,000,000 annually, or approximately 30 percent.

(2) Its enactment would provide, on an unsound basis, a subsidy for American vessels engaged in the protected intercoastal trade. If subsidizing such vessels is deemed proper, it is believed that this should be accomplished by granting a subsidy under conditions which will require the consideration of all factors in determining the steamship lines to be benefited and the extent of such benefits.

(3) The term "intercoastal trade" used in the bills has no fixed significance, and its use without clarifying definition would apparently result in exempting some vessels from the payment of tolls, although they would possibly be entitled to a subsidy because engaged in foreign as well as in intercoastal trade.

In the light of these views and such other information it possesses the Commission does not now favor any change in the present law.

Although the lines operating in the coastwise and intercoastal trades are privately owned, the very nature of their operations entails certain responsibilities to the public and the national welfare which are inescapable. The producer, distributor, and consumer are all affected by the water lines' stability, as well as their ability to give efficient service. The place of the water-carrier industry in the economy and welfare of the Nation is intimately related to other transportation facilities. It is essential, therefore, that the fullest cooperation should exist, not only within the industry, but between it, on the one hand, and the railroads, motor-transport companies, and the Federal Government, on the other, to the end that an efficient, stable, and profitable transportation structure shall be maintained.

APPENDIXES

UNITED STATES MARITIME COMMISSION—COASTWISE AND INTERCOASTAL SURVEY

APPENDIX 1

In order to facilitate analysis of coastwise commodity movements, the Atlantic, Gulf, and Pacific coasts have been divided into seven geographic districts.

GEOGRAPHIC DISTRICTS INCLUDED IN ANALYSIS OF COASTWISE COMMODITY MOVEMENTS

1. New England district: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut.
2. Middle Atlantic district: New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia.
3. South Atlantic district: North Carolina, South Carolina, Georgia, east coast of Florida.
4. East Gulf district: West coast of Florida, Alabama, Mississippi.
5. West Gulf district: Louisiana, Texas.
6. Southwest Pacific district: California.
7. Northwest Pacific district: Oregon, Washington.

Data on in-bound and out-bound movements are shown separately in the following tables for each district. It will be noted that intra-district commodity movements, both in-bound and out-bound, are shown for each district, as well as the tonnage movements to and from other districts on the Atlantic-Gulf, and Pacific coasts. Thus, for example, in the in-bound receipts for the New England district, a total of 1,427,703 tons is shown as having moved between New England ports only, as well as tonnage moving to the New England district from the four other Atlantic-Gulf district ports.

APPENDIX 2

Principal commodities transported in domestic coastwise and intercoastal trades, calendar year 1937

Trade route	Principal commodities	
	North-bound	South-bound
Atlantic coastwise	Canned goods. Cotton and linters. Cottonseed. Coal. Crude rubber. Grain products. Hides.	Beverages. Canned goods. Cotton cloth and fabrics. Cement. Fertilizer materials. Fertilizer products. Grain products.

Principal commodities transported in domestic coastwise and intercoastal trades, calendar year 1937—Continued

Trade route	Principal commodities	
	North-bound	South-bound
Atlantic coastwise	Lumber. Naval stores. Paper and products. Petroleum products. Tobacco and products.	Hay and feed. Newsprint. Paper and products. Petroleum products. Sugar.
Atlantic-Gulf coastwise	Canned goods. Cotton and linters. Cottonseed. China clay. Grain and products. Hides. Lumber and products. Naval stores. Petroleum and products. Phosphate rock. Paper and products. Salt. Sulphur.	Automobile parts. Bags and bagging. Beverages. Canned goods. Chemicals. Cotton cloth and fabrics. Fertilizer. Iron and steel products. Machinery. Paper and products. Petroleum and products. Soap. Sugar.
	East-bound	West-bound
Gulf coastwise	Canned goods. Fertilizer materials. Grain products. Iron and steel products. Petroleum and products. Sugar.	Bags and bagging. Canned goods. Iron and steel products. Lumber and products. Petroleum and products. Phosphate rock.
Gulf coast-Pacific coast	Canned goods. Copper and bronze. Fertilizer materials. Grain products. Molasses. Newsprint. Sugar. Lumber and products.	Canned goods. Iron and steel products. Liquors. Paper and products. Paints and pigments. Soap. Sulphur. Naval stores.
Atlantic coast-Pacific coast	Canned goods. Coconuts. Dried fruits and vegetables. Grain products. Hides. Sugar. Wool. Lumber and products. Petroleum products.	Automobiles and trucks. Chemicals. Iron and steel products. Medicines and drugs. Petroleum products. Soap. Textiles.
	North-bound	South-bound
Pacific coastwise	Automobiles and trucks. Canned goods. Chemicals. Iron and steel products. Petroleum products. Salt. Soap. Sugar. Textiles.	Canned goods. Grain and products. Lumber and products. Ore and concentrates. Paper and manufactures
Pacific coast-Alaska	Building material. Canned goods. Coal. Cement. Grain and products. Hay. Iron and steel products. Lumber and products. Petroleum products. Salt.	Fresh and canned fish. Ore and concentrates.

Principal commodities transported in domestic coastwise and intercoastal trades, calendar year 1937—Continued

Trade route	Principal commodities	
	East-bound	West-bound
Pacific coast-Hawaiian	Canned goods. Molasses. Sugar.	Beverages. Canned goods. Cement. Fertilizer materials. Grain products. Iron and steel products. Lumber and products. Petroleum and products.
Atlanti coast-Hawaiian	Canned goods. Molasses. Sugar.	Canned goods. Cotton manufactures. Drugs and chemicals. Fertilizer materials. Iron and steel products.
Pacific coast-Puerto Rico	Chemicals. Grain products. Lumber. Rice. Petroleum products.	
	South-bound	North-bound
Gulf Coast-Puerto Rico	Fertilizer. Grain products. Lumber. Packing-house products. Petroleum products. Rice.	Molasses. Sugar.
Atlantic coast-Puerto Rico	Coal and coke. Fertilizer. Grain products. Iron and steel products. Lumber. Packing-house products. Petroleum products.	Fruits. Molasses. Tobacco. Sugar.

APPENDIX 3

Coastwise and intercoastal commerce of the United States for calendar years 1933–37, inclusive [1]

[Source: U. S. Maritime Commission, Division of Research, and Corps of Engineers, U. S. Army]

Trade	Short tons				
	1937	1936	1935	1934	1933
Coastwise	141, 684, 890	124, 842, 217	107, 376, 369	103, 723, 604	101, 825, 862
Intercoastal	7, 731, 908	7, 525, 120	8, 065, 441	9, 516, 132	8, 519, 905
Total [2]	149, 416, 798	132, 367, 337	115, 441, 810	113, 239, 736	110, 345, 767

[1] (*a*) The total commerce for each year shown in this tabulation represents the "net coastwise traffic" as reported in the annual reports of the Chief of Engineers, U. S. Army, and includes both coastwise and intercoastal commerce as these reports make no segregation of these two classes of commerce. (*b*) The intercoastal commerce for each year shown in the tabulation is that reported in the Annual Report Series No. 317 of the Bureau of Research, U. S. Maritime Commission. (*c*) The coastwise commerce for each year shown herein is the difference between the "net coastwise traffic" referred to in (*a*) and the intercoastal commerce referred to in (*b*).

[2] The total commerce shown in this table represents traffic carried by all vessels, and is greater than the figure given in the introduction to the report, inasmuch as that figure does not take into account traffic carried in vessels of less than 1,000 gross tons.

Appendix 4

The following tabulation, by districts, was made to show the major commodities moving in domestic ocean trade. In the grouping, by districts, a total of 76 principal ports has been comprehended. These represent ports having a volume of traffic of 200,000 short tons and over. Commodities representing a total movement of 5,000 tons and over for the coastwise trade, and 1,000 tons and over for the intercoastal trade, were considered in the analysis.

The figures in the following tables, pages 40 to 54, inclusive, were developed from the records of the Bureau of Research of the Maritime Commission, and from special reports prepared by the Corps of Engineers, United States Army.

The figures contained in these tabulations, pages 40 to 54, inclusive, are for the calendar year 1937.

Coastwise commodity movements

[Short tons]

NEW ENGLAND

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf
IN-BOUND (RECEIPTS)						
Petroleum and products	11,984,921	721,792	2,304,365			8,958,764
Coal	11,482,834	110,537	11,372,297			
Sand, gravel, and clay	427,312	339,661	71,036	16,615		
Cotton and linters	148,646		6,955	763		140,928
Textiles, cotton	148,017		143,859	3,511		647
Fertilizer and materials	133,304	10,450	37,025	679	41,006	44,144
Lumber	114,734		10,201	89,458		15,075
Rubber and products	106,315		106,315			
Sulphur	94,139		258			93,881
Sugar	82,418		82,418			
Wool and manufactures	56,702		25,930			30,772
Nonmetallic minerals	56,315	7,932	23,574	2		24,807
Trap rock	54,766	54,766				
Chemicals and products, miscellaneous	43,715	1,061	42,168	486		
Oysters and shells	42,232	42,232				
Asphalt	39,392		39,392			
Vegetable food products	39,254	1,506	35,241	83		2,424
Coke	38,539	38,539				
Canned goods	37,150		32,180	928		4,042
Coffee	31,376		31,376			
Paperboard	30,351			15,130	10,000	5,221
Coal tar and products	29,608	11,515	18,093			
Automobiles, trucks, parts	27,511	6,994	20,088	260	169	
Pig iron	27,025	1,136	25,889			
Ores, metals, manufactures, miscellaneous	26,271		26,263	8		
Paper and manufactures	21,830		263		15,000	6,567
Bags and bagging	21,705		21,705			
Naval stores	20,678		47	15,654	4,977	
Beverages	20,178		20,153	1	14	10
Wood and paper products, miscellaneous	18,754		14,104	3,738	912	
Acid	17,583		17,583			
Copper and products	17,102		17,102			
Scrap iron	16,311	4,516	11,795			
Machinery and vehicles, miscellaneous	13,102	13,102				
Flour	12,256		12,256			
Logs, piles, poles, ties	11,891			11,891		
Rice	11,641					11,641
Fish and products	11,224	7,200	4,024			
Hides and skins	7,806		5,688	118	400	1,600
Stone	6,737	6,737				
Roofing	6,431		6,058			373
Vegetable products, inedible	5,754		5,051	703		
Animals and products	5,643		5,643			
Wood pulp	5,474		3,705		1,769	
Tobacco and manufactures	5,470		5,469		1	

Coastwise commodity movements—Continued

[Short tons]

NEW ENGLAND—Continued

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf
IN-BOUND (RECEIPTS)—CON.						
Cement and products	4,934		4,934			
Molasess and sirup	4,846		1,844			3,002
Miscellaneous merchandise	871,806	48,027	588,881	95,233	597	139,068
Total	26,442,003	1,427,703	15,201,228	255,261	74,845	9,482,966
OUT-BOUND (SHIPMENTS)						
Petroleum and products	1,463,334	1,429,544	32,319			1,471
Coal	522,250	522,250				
Scrap iron	94,194	7,101	87,091	2		
Wood and paper products, miscellaneous	51,178	201	48,127	308	500	2,042
Potatoes	49,863		24,711	2,841	5,000	17,311
Textiles, cotton	47,857		47,075	414		368
Fertilizer and materials	46,490	27,343	17,128	1,932	87	
Machinery and vehicles, miscellaneous	37,855	13,098	24,726	31		
Coke	36,871	23,504	13,367			
Ores, metals, manufactures, miscellaneous	36,447	10	36,221	216		
Stone	36,431	10,500	25,931			
Pyrites	28,835		11,409			17,426
Coal tar and products	27,911	14,868	13,043			
Nonmetallic minerals	21,253	4,956	16,297			
Oysters and shells	19,830	19,694	136			
Canned goods	16,041		11,759	510	1,000	2,772
Automobiles, trucks, and parts	16,004	7,973	8,031			
Boots and shoes	13,267		12,552	174	100	441
Wool and manufactures	13,018		13,018			
Chemicals and products, miscellaneous	12,705	2,880	9,574	251		
Animals and products	11,390	300	11,088	2		
Iron, steel, and manufactures	11,098	225	10,572	17	70	214
Asphalt	11,030	11,030				
Fish and products	8,432	8,432				
Copper products	7,553		7,553			
Cocoa, chocolate, and candy	7,198		6,739	176	70	213
Copper ore	6,513		6,513			
Wood pulp	5,032	128	4,904			
Vegetable food products	4,337		4,330	7		
Leather	3,933		3,896	2		35
Beverages	3,630		2,846	123	161	500
Soaps and cleaners	3,212			194	600	2,418
Wood and paper products, miscellaneous	1,544		1,535	9		
Lumber	1,054	1,054				
Vegetable products, inedible	1,037		1,029	8		
Salt	1,000	1,000				
Miscellaneous merchandise	644,836	43,237	362,293	166,503	10,000	62,803
Total	3,324,463	2,149,328	875,813	173,720	17,588	108,014

MIDDLE ATLANTIC

IN-BOUND (RECEIPTS)						
Petroleum and products	44,104,767	122,911	2,561,955	119,912	133,857	41,166,132
Coal	5,587,865	2,650	5,585,215			
Fertilizer and materials	753,903	4,033	43,126	34,729	585,231	86,784
Sulphur	717,129	1,575		3,793	10,320	701,441
Lumber	381,350	2,839	6,012	274,142	30,917	67,440
Fruits and nuts	351,149		12,798	322,019	14,715	1,617
Copper and products	296,746	13,727				283,019
Paper and manufactures	281,960	81,311	7,878	37,240	94,883	60,648
Iron and steel manufactures	235,738	136,940	66,094	20,611	9,342	2,751
Phosphate	191,174		25,056	1,259	131,020	33,839
Logs, piles, poles, ties	190,488		61,078	104,466	20,642	4,302
Paper boards	175,529	3,967		38,116	95,021	38,425
Sugar	143,072	3,894	139,178			
Wood and paper products, miscellaneous	140,868	11,111	20,411	79,266	14,449	15,631

Coastwise commodity movements—Continued

[Short tons]

MIDDLE ATLANTIC—Continued

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf
IN-BOUND (RECEIPTS)—contd.						
Vegetable food products	132,680	3,582	26,193	32,685	12,300	57,920
Iron ore	125,037		125,037			
Vegetables, canned, dried	106,916	8,287	13,577	56,842	2,257	25,953
Flour and meal	114,542		11,380	2	1,801	101,359
Textiles, cotton (dry)	110,735	30,515	38,504	18,835	440	22,441
Coal-tar products	109,464	8,291	98,673			2,500
Molasses and sirup	105,928		90,352	14,198		1,378
Naval stores	105,901		4,930	73,903	20,158	6,910
Cotton and linters	81,516	188	14,090	23,950	3,280	40,008
Pyrites	73,930		73,930			
Fruits, canned, dried	69,316		420	34,005	14,153	20,738
Chemicals and products, miscellaneous	59,409	8,330	25,334	14,230	9	11,506
Salt	57,936					57,936
Soap and cleaners	52,008	10,967	41,041			
Canned goods	47,286	649	6,978	3,712	15,921	20,026
Stone	43,806	43,171				635
Vegetables, inedible	42,563	9,623	4,456	25,606	1,823	1,055
Pig iron	41,186	1,146	40,040			
Grains, miscellaneous	40,520		3,277	10	1,000	36,233
Machinery, vehicles, miscellaneous	23,179	19,895	1,400	606	455	823
Scrap iron	30,706	20,036	10,670			
Nonmetallic minerals	30,024	15,682	911	8,534	381	4,516
Linoleum	27,041		27,041			
Potatoes	26,364	26,364				
Ores, metals, manufactures, miscellaneous	23,879	3,287	3,119	3	1,601	15,869
Books and printed matter	23,524	1,109	22,415			
Wool and manufactures (raw wool)	23,445	6,264	8,537	24	2	8,618
Beverages	21,348	1,134	20,214			
Animal products	18,717	4,283		1,955	413	12,066
Bags and bagging	16,804	930	15,637			237
Sand, gravel, clay (earth)	16,578		16,578			
Lead	16,143	3,196			34	12,913
Leather	15,026	12,752	2,274			
Wood pulp	13,163			12,152		1,011
Rubber and products	9,175		9,175			
Cocoa, chocolate, candy	9,160	3,724	5,436			
Boots and shoes	7,164	7,110	54			
Hides and skins	5,234	182	73	22		4,957
Pigments, paints, and varnish	3,863	1,589	2,274			
Feed	3,312		1,000	1,000		1,312
Automobiles, trucks, parts	1,606	167	64	1,354		21
Fish and products	1,284	335	75		200	674
Miscellaneous merchandise	2,011,938	602,777	928,816	160,503	43,150	276,692
Total	57,451,094	1,240,523	10,222,776	1,519,684	1,259,775	43,208,336
OUT-BOUND (SHIPMENTS)						
Coal	19,499,776	13,211,948	6,281,006	6,132		690
Petroleum and products	7,445,953	3,237,854	3,849,664	147,261	4,113	207,061
Iron and steel manufactures	564,706	22,488	130,131	28,539	27,588	355,960
Textiles, cotton	233,211	152,506	54,623	9,752	1,096	15,234
Sugar	221,512	72,187	107,903	29,491	649	11,282
Pyrites	209,982		209,982			
Coal-tar products	171,953	41,204	52,621	48,581	4,600	24,947
Fertilizer and materials	163,387	56,454	44,511	46,677	11,934	3,811
Soda and compounds	152,430		141,734	3,405	637	6,654
Chemicals and products, miscellaneous	140,393	10,942	61,178	30,331	4,719	33,223
Paper and manufactures	132,935	24,863	15,242	12,407	8,945	71,478
Canned goods	115,788	11,494	22,878	25,170	18,000	38,246
Vegetables, canned and dried	109,451	27,215	23,542	14,512	12,255	31,927
Rubber and products	106,329	95,203	215	805	2,528	7,578
Iron ore	106,130		106,130			
Iron pipe	86,352	1,529	439	48	547	83,789
Vegetable food products	78,549	29,333	5,172	24,578	8,813	10,653
Soap and cleansers	73,997	13,302	31,712	10,459	4,075	14,449
Nonmetallic minerals	61,029	6,794	14,891	20,913	4,097	14,334
Copper and products	54,071	30,047	18,627	513	761	4,123
Coffee	53,554	39,834		6,036	638	7,046
Coke	40,973	107	40,866			
Beverages	39,596	2,017	6,742	16,131	6,878	7,828

Coastwise commodity movements—Continued

[Short tons]

MIDDLE ATLANTIC—Continued

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf
OUT-BOUND (SHIPMENTS)—continued						
Wool and manufactures	38,572	18,831	13,309	3,371	398	2,663
Books and printed material	37,359	4,171	24,885	3,072	462	4,769
Ores, metals, manufactures, miscellaneous	35,743	11,384	4,103	6,666	4,142	9,448
Peanuts	35,428	7,207	23,611	1,009		3,601
Lumber	34,186	21,850	12,155	11	28	142
Sand, gravel, and clay	33,447	15,556		12,767	5,073	51
Automobiles, trucks, parts	31,650	543	3,740	13,893	1,862	11,612
Machinery, vehicles, miscellaneous	31,544	2,381	5,098	4,348	2,293	17,424
Bags and bagging	27,130	18,271	1,786		626	6,447
Grains, miscellaneous	26,438	112	8,595	12,442	2,723	2,566
Logs, piles, poles, ties	26,077		26,077			
Tobacco and manufactures	24,703	6,356	15,433	72		2,842
Vegetables, inedible	23,730	13,648	2,116	2,935	768	4,263
Animal products	21,118	9,683	2,445	6,654	972	1,364
Cocoa, chocolate, candy	20,696	1,816	3,284	4,902	2,057	8,637
Jute and manufactures	19,933	169	9,390	1,004	108	9,262
Pigments, paints, varnish	16,927	1,545	9,939	3,296	607	1,540
Acids	16,713	16,590			7	116
Tin and products	15,715	6		5,491	2,000	8,218
Cotton and linters	12,502		12,502			
Flour and meal	10,195	710	5,109		1,000	3,376
Cement and products	9,309	7,566	1,660			83
Glass and manufactures	8,298	41	121	1,086	1,075	5,975
Potatoes	7,834	5,950	1,719	165		
Feed	4,245			658	500	3,087
Wood and paper manufactures	4,127	22	5	927		3,173
Corn	3,225	1,450	1,775			
Wood pulp	2,176		2,176			
Miscellaneous	2,757,824	528,373	1,029,347	394,724	66,105	739,275
Total	33,198,901	17,781,552	12,440,189	961,234	215,679	1,800,273

SOUTH ATLANTIC

IN-BOUND (RECEIPTS)						
Petroleum products	4,647,645	643	81,168	13,905		4,551,929
Vegetables and products (food)	110,679	70,225	24,971			15,483
Fertilizer and materials	92,873		52,505			40,368
Phosphate	81,989				81,989	
Sulphur	69,506		1,680			67,826
Iron and steel manufactures	50,056	446	48,702	869		39
Beverages	48,186	320	21,930			25,936
Automobiles and machinery	45,903	1,411	43,409	583		500
Canned goods	43,933	750	30,960	3,396		8,827
Paper	40,078	25,342	13,676	1,060		
Flour and meal	27,330	23	10,120	4,020		13,167
Sugar (refined)	24,753	61	21,378	2,400		914
Nitrate of soda	22,908		22,908			
Cement and products	22,759		22,759			
Potatoes	21,700	8,334	13,321			45
Hay and feeds	20,344		17,900	400		2,044
Mineral products	18,829	5,208	10,424			3,197
Metals and manufactures	18,311		18,307			4
Wood and paper and manufactures	18,163	2,772	13,681			1,710
Rock, sand, and stone	16,477		16,477			
Soap and washing compounds	14,456	1,281	13,174	1		
Creosote	9,098		9,098			
Textiles	8,460	3,601	2,148			2,711
Potash	8,125					8,125
Animal products	5,433		5,433			
Tankage	5,099		5,099			
Lumber	4,316		36	4,280		
Rice	3,425					3,425
Soda ash	2,677					2,677
Vegetable products (inedible)	2,092		2,092			
Rubber manufactures	1,909		1,909			
Potatoes, white	1,895	1,895				

Coastwise commodity movements—Continued

[Short tons]

SOUTH ATLANTIC—Continued

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf
IN-BOUND (RECEIPTS)—CON.						
Salt	1,818					1,818
Fish and products	1,292		1,292			
Miscellaneous merchandise	551,191	43,349	399,801	10,581	460	97,000
Total	6,063,708	165,661	926,358	41,495	82,449	4,847,745
OUT-BOUND (SHIPMENTS)						
Petroleum products	259,977		207,809	49,099		3,069
Fruits, fresh and citrus	226,778	18	226,736	24		
Cross ties	194,727	48,548	146,179			
Lumber	189,875	43,421	146,375	79		
Wood and paper and manufactures	90,375	36,048	49,732	798		3,797
Naval stores	89,044	13,883	75,080	81		
Cottonseed products	38,943	6,879	30,203	1,861		
Cotton manufactures and textiles	37,895	3,943	28,507	38		5,407
Fertilizer and material	36,586	748	33,535	2,303		
Potatoes	35,382	131	35,246	5		
Pig iron	29,414	10,661	18,753			
Canned goods	18,473	1,177	10,900	6,156		240
Sirup and molasses	18,435	17,385	1,050			
Glass bottles	14,564		7,282			7,282
Vegetable products (food)	14,468	2,637	11,775	56		
Wood pulp	12,193	233	11,960			
Mineral products	11,999	4,972	6,967	60		
Automobiles and parts	10,843	243	6,930	3,470		200
Sugar (refined)	9,729		2,725	3,799	3,205	
Vegetable products (inedible)	6,277	3,352	2,466			459
Containers, wood, empty	4,797		2,398			2,399
Ores, metal and manufactures	2,609		1,285			1,324
Fullers earth and clay	1,689		666	1,023		
Miscellaneous merchandise	234,588	45,185	150,693	27,477	96	11,137
Total	1,589,660	239,464	1,215,252	96,329	3,301	35,314

EAST GULF

IN-BOUND (RECEIPTS)						
Petroleum products	1,875,691		1,369		2,296	1,872,026
Sand, gravel, and clay	57,759		51,302		2,857	3,600
Sulfur	46,457				13,927	32,530
Canned goods	37,885	247	36,272		320	1,046
Iron and steel manufactures	35,133	144	16,292		15,634	3,063
Grain and products	32,511		1,282			31,229
Phosphate	31,101				31,101	
Wood and paper products	28,695	350	3,830		1,025	23,490
Flour	26,127					26,127
Nitrates	25,167		6,100		19,067	
Asphalt	15,405		250		11	15,144
Fertilizer and materials	14,390	7,869	6,521			
Beverages	13,231	1,521				11,710
Gypsum	12,678					12,678
Vegetables and fruits	9,789	5,413	2,915		570	891
Potatoes	9,318	9,318				
Vegetable food products	6,179	80	2,293		1,208	2,598
Soap and washing compounds	5,910		5,910			
Other chemicals	5,220		2,610			2,610
Ores, metals and manufactures	3,244		2,433			811
Crude rubber	2,718		1,534			1,184
Vegetable products (inedible)	2,526		1,894			632
Nonmetallic minerals	2,338					2,338
Sugar	2,279					2,279
Textiles	2,000		2,000			
Animal products	1,913		638			1,275
Naval stores	1,451			1,451		
Miscellaneous merchandise	127,295	21,815	67,274	1,250	2,500	34,456
Total	2,434,410	46,757	212,719	2,701	90,516	2,081,717

Coastwise commodity movements—Continued

[Short tons]

EAST GULF—Continued

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf
OUT-BOUND (SHIPMENTS)						
Phosphate	819,642		736,458	83,184		
Pulp board	165,922	44,774	121,148			
Paper and manufactures	94,516	15,684	78,832			
Petroleum products	65,606	872	4,937		56,889	2,908
Fruits, citrus (canned)	67,088		41,529		25,559	
Fruits, citrus (fresh)	55,737		49,917		5,820	
Lumber and products	46,266	8,575	37,659		32	
Naval stores	23,584	3,946	19,638			
Cotton and textiles	11,731	8,223	3,508			
Canned goods	11,151	1,110	8,370		1,671	
Pig iron	10,069	4,346	5,723			
Coke	8,394				2,136	6,258
Iron and steel manufactures	3,391					3,391
Wood manufactures	2,178		2,178			
Vegetable food products	2,111		2,111			
Vegetable products (inedible)	1,844		1,844			
Feed	1,539			1,539		
Peanuts	913	195	698			20
Miscellaneous merchandise	59,308	8,721	38,701	1,000	2,738	8,148
Total	1,450,990	96,446	1,153,251	85,723	94,845	20,725

WEST GULF

IN-BOUND (RECEIPTS)						
Petroleum and products	8,583,105	1,784	190,252		4,938	8,386,131
Iron and steel	885,254	2,446	853,624	1,212	11,188	16,784
Limestone and shale	218,084					218,084
Chemicals and products	94,008	10,499	81,134	1,862	513	
Vegetables, canned, dried, fresh	82,073	12,044	46,390	1,798	11,179	10,662
Canned goods	78,767	550	77,839	378		
Sulfur	77,045					77,045
Paper and manufactures	46,241	4,388	35,718	2,542	2,142	1,451
Machinery and vehicles	42,060	7,813	33,287	437	296	227
Phosphate and superphosphate	40,512		8,788		31,724	
Fruits and nuts	37,811	6,690	16,933	60	7,892	6,236
Textiles, cotton	37,572	1,086	35,894	592		
Glass and manufactures	37,168		22,535	6,307	5,971	2,355
Fruits, canned	30,555	800	29,417	110	78	150
Asphalt	22,893		4,723			18,170
Ores, metals, and manufactures	22,822		22,822			
Sand	22,768					22,768
Tin and products	14,876		14,876			
Roofing	12,120	48	10,172			1,900
Coffee	10,747	1,035	9,246		466	
Bags and bagging	10,646	1,645	6,985	952	11	1,053
Beverages	10,299	1,287	4,780	146	64	4,022
Soaps	6,952	1,737	5,171	44		
Nitrate of soda	4,116		4,116			
Soda and compounds	3,825		3,658		107	60
Fertilizer and materials	2,957		2,447		510	
Lumber	2,789	25	77			2,687
Fish and products	2,769	797	1			1,971
Corn	1,428		1,428			
Flour	1,235		1,235			
Miscellaneous merchandise	592,272	58,350	483,105	11,074	3,347	36,396
Total	11,035,769	113,024	2,006,653	27,514	80,426	8,808,152
OUT-BOUND (SHIPMENTS)						
Petroleum and products	69,474,068	9,264,213	44,117,487	5,929,709	862,777	9,299,882
Sulfur	1,185,176	110,968	888,336	67,335	28,613	89,924
Copper and products	275,654		275,654			
Asphalt	229,843	46,857	165,574	6,807	2,284	8,321
Flour	215,712	6,500	150,853	47,145	11,161	53
Soda and compounds	151,852		151,555	111	186	
Cotton and linters	147,770	110,531	34,287	2,118	484	350
Chemicals and products, miscellaneous	132,048	1,716	23,425	100,999	262	5,646

Coastwise commodity movements—Continued

[Short tons]

WEST GULF—Continued

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf
OUT-BOUND (SHIPMENTS)—continued						
Rice	126,995	2,314	66,268	48,620	2,933	6,860
Salt	109,732	735	65,093	30,343	5,870	7,691
Paper and manufactures	89,824	26,146	59,684	1,382	1,909	703
Lumber	89,664	12,281	76,528	277	468	110
Feed	88,090	1,163	40,545	14,434	26,082	5,866
Textiles, cotton	67,031	40,870	26,161			
Wood and paper products, miscellaneous	59,826	5,659	44,626	7,034	2,507	
Beverages	49,365	10	1,634	11,582	11,142	24,997
Sugar	48,635		938	1,188	1,730	44,779
Vegetables, canned, dried, fresh	45,104	1,950	32,025	2,323	2,941	5,865
Ores, metal manufactures, miscellaneous	32,845		32,845			
Wool and manufactures	25,553	17,887	7,666			
Molasses and sirup	19,743	4,752	10,846		766	3,379
Canned goods	19,582	6,462	13,120			
Lead	18,433		18,433			
Gypsum	11,432				11,432	
Coffee	10,687	380	444	257	1,387	8,219
Fruits, canned, dried	10,112	1,056	2,266	490	1,035	5,265
Iron and steel and manufactures	8,245	1,800	1,868	313	776	3,488
Fertilizer and materials	5,361		63			5,298
Naval stores	4,171	963	3,157			51
Animals and products	3,647		16		315	3,316
Vegetable-food products	1,780		1,780			
Miscellaneous merchandise	334,460	44,232	192,444	25,288	15,717	56,779
Total	73,092,440	9,709,445	46,505,621	6,297,755	992,777	9,586,842

SOUTHWEST PACIFIC

	Total	Southwest Pacific	Northwest Pacific
IN-BOUND (RECEIPTS)			
Petroleum	8,784,971	8,784,971	
Lumber	1,669,030	141,272	1,527,758
Books and printed matter	140,163		140,163
Fish and products	136,533	136,521	12
Grains and miscellaneous wheat	64,287	11,366	52,921
Flour and meal	53,781	10	53,771
Iron and steel and manufactures	52,366		52,366
Sugar	28,675	28,675	
Canned goods	26,913		26,913
Chemicals and products, miscellaneous	24,949	18,337	6,612
Automobiles, trucks, and parts	11,191	11,191	
Soaps and cleansers	7,528	7,528	
Wood pulp	6,733		6,733
Copper	3,413		3,413
Beverages	2,622	2,622	
Cement and products	1,145	1,145	
Miscellaneous	136,591	13,728	122,863
Total	11,150,891	9,157,366	1,993,525
OUT-BOUND (SHIPMENTS)			
Petroleum and products	6,044,571	1,660,120	4,384,451
Canned goods	85,192	6,035	79,157
Salt	72,981	51,834	21,147
Sugar	52,355	20,235	32,120
Chemicals, products, miscellaneous	36,479	539	35,940
Iron and steel manufactures	30,982		30,982
Lumber	16,925	5,053	11,872
Automobiles, trucks, parts	16,332	1,188	15,144
Beverages	14,029	1,403	12,626
Feed	10,963	308	10,655
Soaps and cleansers	9,213	383	8,830
Fruits, dried and canned	5,662		5,662
Roofing	4,900	57	4,843
Flour and meal	4,130	4,130	

Coastwise commodity movements—Continued

[Short tons]

SOUTHWEST PACIFIC—Continued

	Total	Southwest Pacific	Northwest Pacific
OUT-BOUND (SHIPMENTS)—continued			
Rice	3,789	----------	3,789
Animal products	3,101	63	3,038
Rubber and products	1,756	17	1,739
Barley	1,729	----------	1,729
Fruits, fresh and citrus	1,523	510	1,013
Fish and products	1,212	293	919
Miscellaneous	55,268	16,336	38,932
Total	6,473,092	1,768,504	4,704,588

NORTHWEST PACIFIC

IN-BOUND (RECEIPTS)			
Petroleum and products	5,594,691	5,539,114	55,577
Wood pulp	86,726	----------	86,726
Salt	84,647	84,647	----------
Cement	59,863	59,863	----------
Sugar	57,220	57,220	----------
Asphalt	45,842	45,842	----------
Lumber	38,667	----------	38,667
Logs, piles, poles, ties	36,097	2,610	33,487
Sand and gravel	28,606	----------	28,606
Vegetable food products	27,176	27,176	----------
Chemicals and products, miscellaneous	20,551	20,551	----------
Fruits and vegetables	19,557	19,557	----------
Automobiles, trucks, and parts	16,278	16,278	----------
Paper and products	15,683	13,189	2,494
Canned goods	14,495	14,471	24
Ores, metals and manufactures	14,313	14,313	----------
Beverages	13,488	8,853	4,635
Iron and steel manufactures	11,261	11,261	----------
Feed	4,731	4,731	----------
Barley	4,428	4,428	----------
Nonmetallic minerals	4,401	4,401	----------
Soaps and cleansers	4,218	4,218	----------
Textiles and cotton	4,050	4,050	----------
Soda and compounds	3,255	2,945	310
Animal products	2,768	2,768	----------
Rice	1,873	1,873	----------
Vegetable products (inedible)	1,672	1,672	----------
Glass and manufactures	1,605	1,605	----------
Roofing materials	1,593	1,593	----------
Canned fish	1,511	----------	1,511
Machinery and vehicles, miscellaneous	1,498	1,498	----------
Coffee	1,489	1,489	----------
Oats	1,131	----------	1,131
Miscellaneous merchandise	274,522	142,148	132,374
Total	6,499,906	6,114,364	385,542
OUT-BOUND (SHIPMENTS)			
Lumber	1,158,610	1,077,890	80,720
Petroleum and products	147,668	147,668	----------
Paper and manufactures	112,612	112,612	----------
Grains, miscellaneous, wheat	62,001	62,001	----------
Flour and meal	46,409	45,502	907
Wood pulp	42,990	2,110	40,880
Logs, piles, poles, ties	23,483	21,860	1,623
Feed	19,730	11,474	8,256
Soda and compounds	13,506	13,175	331
Canned goods	9,862	9,842	20
Fish and products	9,734	8,506	1,228
Pig iron	8,751	8,751	----------
Copper and products	7,217	7,217	----------
Oats	5,573	5,573	----------
Ores, metals and manufactures	4,184	4,184	----------
Fruits, canned, dried	4,009	4,009	----------
Vegetables, canned, dried, fresh	2,025	2,004	21
Wood and paper products, miscellaneous	1,572	1,529	43
Vegetable food products	1,524	1,484	40
Nonmetallic minerals	1,053	1,053	----------
Miscellaneous merchandise	292,172	107,778	184,394
Total	1,974,685	1,656,222	318,463

APPENDIX 5

The figures in the following tables, pages 48 to 51, inclusive, were taken from Report No. 317, Bureau of Research, United States Maritime Commission, and are for the calendar year 1937.

Intercoastal commodity movements

[Short tons]

NEW ENGLAND

	Total	Southwest Pacific	Northwest Pacific
IN-BOUND (EAST-BOUND)			
Commodity			
Logs and lumber	344,682	3,176	341,506
Petroleum and products	199,917	199,917	
Paper stock and manufactures	120,866	6,716	114,150
Canned fruits	67,246	53,360	13,886
Vegetables and products	28,726	19,692	9,034
Wool and manufactures	23,825	14,172	9,653
Wheat flour	22,924	111	22,813
Dried fruits	21,838	21,562	276
Canned salmon	11,730	451	11,279
Canned fish	6,973	5,929	1,044
Miscellaneous	55,498	41,104	14,394
Total	904,225	366,190	538,035
OUT-BOUND (WEST-BOUND)			
Paper stock and manufactures	12,187	10,308	1,879
Vegetables and vegetable products (n. e. s.)	11,973	8,502	3,471
Pigments, chemicals, and manufactures (n. e. s.)	11,215	8,602	2,613
Iron, steel manufactures	7,874	6,464	1,410
Miscellaneous	52,638	40,710	11,928
Total	95,887	74,586	21,301

MIDDLE ATLANTIC

IN-BOUND (EAST-BOUND)			
Logs and lumber	1,213,638	19,817	1,193,821
Petroleum and products	497,585	497,585	
Canned fruits	333,092	269,059	64,033
Paper stock and manufactures	169,136	5,600	163,536
Vegetables and vegetable products	131,314	102,449	28,865
Dried fruits	124,195	115,157	9,038
Wheat flour	87,468	1,783	85,685
Wheat	53,308	1,527	51,781
Nonmetallic minerals and manufactures	45,613	35,607	10,006
Sugar	38,819	38,819	
Copper and manufactures	38,577	12,961	25,616
Canned salmon	35,913	554	35,359
Canned fish	34,888	30,722	4,166
Pigments, chemicals, and manufactures	34,201	33,696	505
Ores, metals, and manufactures	34,104	18,134	15,970
Fertilizers	25,556	25,556	
Fruits	23,129	22,968	161
Nuts	20,464	17,687	2,777
Textiles and manufactures	17,843	17,630	213
Animal and dairy products	15,551	8,912	6,639
Hides, skins and manufactures	12,579	10,411	2,168
Iron, steel, and manufactures	9,050	7,523	1,527
Fish and products	6,345	2,741	3,604
Oil cake and meal	6,234	6,204	30
Cotton, raw	5,768	5,256	512
Canned milk	5,671	3,108	2,563
Miscellaneous	84,784	63,608	21,176
Total	3,104,825	1,375,074	1,729,751

Intercoastal commodity movements—Continued

[Short tons]

MIDDLE ATLANTIC—Continued

	Total	Southwest Pacific	Northwest Pacific
OUT-BOUND (WEST-BOUND)			
Iron and steel manufactures	1,025,462	869,888	155,574
Pigments, chemical manufactures (n. e. s.)	164,464	138,608	25,856
Vegetables and vegetable products (n. e. s.)	119,879	102,100	17,779
Petroleum products	111,374	96,152	15,222
Paper stock and manufactures	93,403	78,009	15,394
Nonmetallic minerals and manufactures	67,043	55,835	11,208
Vehicles	35,615	30,667	4,948
Textiles and manufactures (n. e. s.)	33,313	26,976	6,337
Machinery	31,365	26,328	5,037
Fertilizers	26,188	17,750	8,438
Copper and manufactures	24,145	21,458	2,687
Coal and coke	23,070	18,253	4,817
Ore, metals, manufactures (n. e. s.)	9,580	9,148	432
Nuts	7,142	5,883	1,259
Cotton manufactures	7,027	6,104	923
Rubber and manufactures	6,814	6,360	454
Logs and lumber	6,102	4,717	1,385
Miscellaneous	309,996	134,299	175,697
Total	2,101,982	1,648,535	453,447

SOUTH ATLANTIC

IN-BOUND (EAST-BOUND)			
Wheat flour	90,510	1,568	88,942
Canned fruits	33,415	29,199	4,216
Logs and lumber	29,164	3,139	26,025
Petroleum and products	17,024	17,024	----------
Vegetables and vegetable products	13,430	11,796	1,634
Canned salmon	11,582	101	11,481
Canned fish	10,621	9,137	1,484
Paper stock and manufacturing	8,270	108	8,162
Dried fruits	7,218	7,218	----------
Fertilizer	6,664	6,664	----------
Wheat	6,203	----------	6,203
Miscellaneous	19,216	13,789	5,427
Total	253,317	99,743	153,574
OUT-BOUND (WEST-BOUND)			
Nonmetallic	11,358	6,035	5,323
Naval stores	9,183	4,757	4,426
Cotton manufactures	8,987	8,127	860
Animal and dairy products	7,768	2,630	5,138
Iron and steel manufactures	5,813	4,973	840
Miscellaneous	28,516	23,901	4,615
Total	71,625	50,423	21,202

EAST GULF

IN-BOUND (EAST-BOUND)			
Wheat flour	29,519	995	28,524
Logs and lumber	19,544	372	19,172
Canned fruits	13,973	12,989	984
Vegetables and products	13,008	11,523	1,485
Canned fish	9,585	6,224	3,361
Miscellaneous	25,885	13,274	12,611
Total	111,514	45,377	66,137
OUT-BOUND (WEST-BOUND)			
Iron and steel manufactures	202,231	158,807	43,424
Paper-stock manufactures	18,148	15,389	2,759
Canned fruits	15,989	10,994	4,995
Logs and lumber	8,682	8,048	634
Naval stores	7,375	3,259	4,116
Miscellaneous	9,990	7,986	2,004
Total	262,415	204,483	57,932

Intercoastal commodity movements—Continued

[Short tons]

WEST GULF

	Total	Southwest Pacific	Northwest Pacific
IN-BOUND (EAST-BOUND)			
Sugar	83,665	83,665	
Logs and lumber	57,243	2,091	55,152
Canned fruits	34,365	30,761	3,604
Wheat	26,774	34	26,740
Vegetable products	26,638	25,290	1,348
Canned fish	19,045	12,394	6,651
Pigments, chemicals, and manufactures	11,510	10,790	720
Dried fruits	9,634	9,176	458
Canned salmon	7,619	65	7,554
Petroleum and products	7,254	7,254	
Paper stock and manufactures	7,562	74	7,488
Wheat flour	5,827	172	5,655
Miscellaneous	22,525	19,078	3,447
Total	319,661	200,844	118,817
OUT-BOUND (WEST-BOUND)			
Sulfur	213,624	74,522	139,102
Iron, steel, and manufactures	126,418	103,710	22,708
Petroleum products	40,305	36,626	3,679
Vegetables and vegetable products (n. e. s.)	29,182	23,944	5,238
Logs and lumber	18,045	16,832	1,213
Paper stock and manufactures	11,597	8,866	2,731
Pigments, chemicals, and manufactures (n. e. s.)	9,121	7,301	1,820
Machinery	8,008	6,397	1,611
Rice	6,953	4,667	2,286
Oil cake and meal	6,807	4,415	2,392
Animal dairy	5,782	3,014	2,768
Miscellaneous	31,414	22,351	9,063
Total	507,256	312,645	194,611

SOUTHWEST PACIFIC

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf
IN-BOUND (WEST-BOUND)						
Iron, steel and manufactures	1,143,842	6,463	869,888	4,973	158,808	103,710
Pigments, chemicals, and manufactures	155,104	8,602	138,608	188	405	7,301
Vegetables and products	136,856	8,502	102,100	2,186	124	23,944
Petroleum products	132,989	186	96,152	25		36,626
Paper stock and manufactures	116,366	10,308	78,009	3,794	15,389	8,866
Sulfur	75,109		97	389	100	74,523
Nonmetallic minerals and manufactures	69,023	4,783	55,835	6,035	189	2,181
Machinery	34,311	1,503	26,328	54	29	6,397
Logs and lumber	33,408	629	4,715	3,183	8,049	16,832
Textiles and manufactures	31,603	2,203	26,976	1,109	544	771
Vehicles	30,787	30	30,668	12		77
Copper and manufactures	22,344	861	21,458			25
Cotton manufactures	21,081	2,645	6,104	8,127	3,546	659
Coal and coke	19,034		18,254	624		156
Fertilizers	18,245	202	17,750	60	91	142
Canned fruits	17,456	1,683	3,846	791	10,994	142
Ores, metals and manufactures (n. e. s.)	10,080	371	9,148			561
Naval stores	9,880	36	1,075	4,757	3,259	753
Nuts	9,829		5,884	3,689	256	
Animal and dairy products	9,026	530	2,751	2,630	101	3,014
Rubber and manufactures	7,261	884	6,361			16
Miscellaneous	299,037	22,708	256,476	6,341	2,062	11,450
Total	2,402,671	73,129	1,778,483	48,967	203,946	298,146

Intercoastal commodity movements—Continued

[Short tons]

SOUTHWEST PACIFIC—Continued

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf
OUT-BOUND (EAST-BOUND)						
Petroleum products	721,780	199,917	497,585	17,024		7,254
Canned fruits	395,368	53,360	269,059	29,200	12,988	30,761
Vegetables and products	170,748	19,692	102,449	11,796	11,522	25,289
Dried fruit	156,130	21,562	115,158	7,218	3,016	9,176
Sugar	122,484		38,819			83,665
Canned fish	64,406	5,929	30,722	9,137	6,224	12,394
Pigments, chemicals (n. e. s.)	51,000	3,867	33,697	2,111	535	10,790
Nonmetallic minerals	44,458	3,181	35,607	644	63	4,963
Fertilizers	42,900	5,548	25,556	6,664	4,612	520
Logs and lumber	28,595	3,176	19,817	3,139	372	2,091
Fruits	23,605	579	22,968		15	43
Textiles and manufactures	21,223	849	17,629	859	121	1,765
Nuts	20,342	558	17,687	531	125	1,441
Ores, metals, and manufactures	19,278	1,046	18,134	31		67
Wool manufactures	15,925	14,172	1,753			
Hides, skins, and manufactures	14,001	3,564	10,412	25		
Paper stock and manufactures	13,030	6,716	5,600	108	532	74
Copper and manufactures	12,961		12,961			
Animal and dairy products	12,930	3,571	8,912	77		370
Oil cake and meal	11,230	3,435	6,204	767	804	20
Iron, steel, and manufactures	9,635	420	7,523		261	1,431
Cotton, raw	7,007	889	5,256	517		345
Miscellaneous	108,191	9,951	84,567	7,544	1,119	5,010
Total	2,087,227	361,982	1,388,075	97,392	42,309	197,469

NORTHWEST PACIFIC

IN-BOUND (WEST-BOUND)						
Iron, steel, and manufactures	223,955	1,410	155,573	840	43,424	22,708
Sulfur	139,200		20	78		139,102
Pigments, chemicals, and manufactures	30,501	2,613	25,857	59	152	1,820
Vegetables and products	27,247	3,471	17,779	688	71	5,238
Paper stock and manufactures	23,367	1,879	15,394	604	2,759	2,731
Petroleum products	18,917		15,222		16	3,679
Nonmetallic minerals and manufactures	18,300	588	11,208	5,324		1,180
Naval stores	8,783		62	4,426	4,116	179
Animal and dairy products	8,678	49	398	5,138	325	2,768
Textiles and manufactures	8,637	1,356	6,337	409	116	419
Fertilizer	8,453		8,438			15
Machinery	7,003	298	5,037	23	34	1,611
Canned fruits	6,149	249	535	194	4,995	176
Miscellaneous	107,303	8,046	93,079	1,161	693	4,324
Total	636,493	19,959	354,939	18,944	56,701	185,950
OUT-BOUND (EAST-BOUND)						
Logs and lumber	1,635,677	341,508	1,193,821	26,024	19,172	55,152
Paper stock and manufactures	295,948	114,150	163,535	8,162	2,612	7,489
Wheat flour	231,620	22,813	85,685	88,943	28,524	5,655
Wheat	91,520	3,334	51,781	6,203	3,462	26,740
Canned fruits	86,723	13,886	64,033	4,216	984	3,604
Canned salmon	68,065	11,278	35,359	11,481	2,393	7,554
Vegetables and products	42,367	9,034	28,866	1,634	1,485	1,348
Copper manufactures	26,937	756	25,617			564
Canned fish	16,706	1,044	4,166	1,484	3,361	6,651
Ores, metals and manufactures	16,050		15,970			80
Nonmetallic minerals and manufactures	11,599	1,004	10,006			589
Wool manufactures	11,311	9,652	1,659			
Dried fruits	9,829	276	9,038		57	458
Animal and dairy products	7,806	749	6,639	56		362
Oats	5,690	50	3,800	847	993	
Miscellaneous	48,466	4,754	39,633	2,622	647	810
Total	2,606,314	534,288	1,739,608	151,672	63,690	117,056

APPENDIX 6

The figures in the following tables, pages 52 to 54, inclusive, were developed from special reports furnished by the Corps of Engineers, United States Army, and are for the calendar year 1937.

Noncontiguous commodity movements

[Short tons]

HAWAII

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf	Southwest Pacific	Northwest Pacific
IN-BOUND, UNITED STATES—								
RECEIPTS								
Pineapple, canned	207,661						207,661	
Coffee	1,247						1,247	
Fruits, dried, canned	108,763		85,831			16,878		6,054
Sugar	821,616		217,594			19,693	578,919	5,410
Vegetable food products	2,848						2,848	
Paperboard	6,085		6,085					
Canned goods	33,231		12,069			10,000		11,162
Sirup and molasses	117,658						95,175	22,483
Miscellaneous	26,244		13,230			3,025	7,441	2,548
Iron and steel	1,407						1,407	
Metals	10,433						10,433	
Total	1,337,193		334,809			49,596	905,131	47,657
OUT-BOUND, UNITED STATES—								
SHIPMENTS								
Animals and animal products	9,569		1,445				8,124	
Vegetable food products	11,209		2,227				8,982	
Dairy products	2,737						2,737	
Cereals	1,430						1,430	
Paper manufactures	7,386		1,053					6,333
Nonmetallic minerals	35,064		1,663				33,401	
Fruits, canned and pressed	1,934						1,934	
Iron, steel, and manufactures	37,272		15,588				19,680	2,004
Machinery and vehicles	15,904		6,626				9,278	
Chemicals	11,782		2,686				6,992	2,104
Coal-tar products	10,587		10,587					
Flour	16,028						2,109	13,919
Feed and hay	36,948						15,006	21,942
Logs and lumber	79,819						14,486	65,333
Milk, canned	6,343						3,469	2,874
Fruits, fresh	5,446						4,350	1,096
Groceries and provisions	30,435						20,648	9,787
Furniture	9,077							9,077
Rice	34,167						34,167	
Beverages	1,270						1,270	
Vegetables, canned	4,488						4,488	
Vegetables, fresh	11,407						11,407	
Cotton, manufactures	1,535						1,535	
Textiles	1,611						1,611	
Wood, manufactures	3,275						3,275	
Asphalt	18,611						18,611	
Nonmetallic minerals	10,036						10,036	
Cement	26,647						26,647	
Fertilizers	3,189						3,189	
Paints and pigments	4,378						4,378	
Lubricating oil and grease	9,800						9,800	
Soap	1,704						1,704	
Petroleum products	235,354						235,354	
Miscellaneous	73,633		37,165				23,279	13,189
Total	770,075		79,040				543,377	147,658

Noncontiguous commodity movements—Continued

[Short tons]

PUERTO RICO

	Total	New England	Middle Atlantic	South Atlantic	East Gulf	West Gulf	Southwest Pacific	Northwest Pacific
IN-BOUND, UNITED STATES—								
RECEIPTS								
Sirup and molasses	14,482		8,282			6,200		
Animals and animal products	1,193		1,193					
Vegetable food products	11,161		11,161					
Fruits and nuts	26,090		26,090					
Fruits, dried, canned, pressed	2,217		2,217					
Sugar	602,808		500,043	26,543	5,729	70,493		
Vegetables, canned, dried, pressed	1,542		1,542					
Other vegetable products, inedible	3,165		3,165					
Petroleum and products	10,506		10,506					
Ores, metals and manufactures	2,615		2,615					
Chemicals	4,321		4,321					
Miscellaneous	15,674		13,518	1,164		992		
Total	695,774		584,653	27,707	5,729	77,685		
OUT-BOUND, UNITED STATES—								
SHIPMENTS								
Animal and animal products	32,693		22,467			10,226		
Vegetable food products	12,209		9,569				2,640	
Beverages	1,836		1,836					
Vegetables, canned, dried, pressed	13,675		9,890			3,785		
Other vegetable products, inedible	10,088		10,088					
Fruits, canned and pressed	1,540						1,540	
Textiles	9,318		9,318					
Bags and bagging	1,039		1,039					
Wood and paper	5,345		5,345					
Nonmetallic minerals	43,497		43,497					
Cement	26,248		26,248					
Petroleum products	4,646		4,646					
Ores, metals and manufactures	8,548		8,548					
Vegetables, fresh	9,926						9,926	
Iron, steel, and manufactures	36,561		32,900		1,423	2,238		
Machinery and vehicles	10,342		10,342					
Chemicals and manufactures	10,796		10,796					
Coal-tar products	21,124		21,124					
Soap	1,842						1,842	
Feed	24,975		22,724			2,251		
Flour	19,388		2,300			15,401		1,687
Logs and lumber	47,350			21,500	14,339	11,511		
Coal	11,028		11,028					
Fertilizer and material	146,510		146,510					
Cross ties	52,330			52,330				
Rice and products	92,401					69,767	22,634	
Paper and manufactures	3,773					1,212		2,561
Miscellaneous	145,501		69,793	45,403	2,795	18,965	6,364	2,181
Total	804,529		480,008	119,233	18,557	135,356	44,946	6,429

NOTE.—In-bound and out-bound refer to United States ports, not Territories.

ALASKA

	Total	Northwest Pacific	Southwest Pacific
IN-BOUND, UNITED STATES—RECEIPTS			
Fish, canned and cured	190,258	161,805	28,453
Ores and concentrates	57,689	57,689	
Fish, fresh	49,436	49,436	
Fish oil	22,422	22,422	
Fish meal	20,365	20,365	
Whale oil	3,387	3,387	
Miscellaneous	103,089	102,000	1,089
Total	446,646	417,104	29,542

Noncontiguous commodity movements—Continued

[Short tons]

ALASKA—Continued

	Total	Northwest Pacific	Southwest Pacific
OUT-BOUND, UNITED STATES—SHIPMENTS			
Lumber	19,007	13,763	5,244
Groceries	9,532	9,532	----------
Beverages	7,999	7,999	----------
Feed	5,965	5,965	----------
Dairy products and eggs	5,131	5,131	----------
Flour	4,409	4,409	----------
Animal and animal products	3,384	3,384	----------
Sugar	2,740	2,740	----------
Coal and coke	4,178	2,568	1,610
Fruits, fresh	2,000	2,000	----------
Vegetables, fresh	1,485	1,485	----------
Nonmetallic minerals	4,656	----------	4,656
Metals and manufactures	5,994	----------	5,994
Petroleum products	76,476	----------	76,476
Miscellaneous	14,947	8,292	6,655
Total	167,903	67,268	100,635

Appendix 7

The traffic carried by steamship companies who replied to the questionnaires used in connection with the present study, is shown in the following tables, pages 54 to 58, inclusive. Traffic statistics were received from over 95 percent of the operators operating vessels of 1,000 gross tons and over. The figures contained in the following tables represent traffic carried by companies operating vessels of 1,000 gross tons and over.

In order not to disclose the identity of any company whose data were used in this report, each company is indicated by a number. Some companies were unable to supply data for earlier years, either because they were not in business, or because of incomplete records. Where this has occurred the letters "NS" are used to indicate data not shown because they are not available.

Some of the companies listed in the tables, pages 54 to 58, showing payable tons carried by private and contract carriers also transport general cargo in common-carrier service at published rates.

Summary statement showing payable tons carried by common, contract, and private steamship companies in coastwise, intercoastal and noncontiguous trades, 1933–37 [1]

[Petroleum products and general cargo in short tons]

	Total	1937	1936	1935	1934	1933
Coastwise and intercoastal trade:						
General cargo:						
Common	70,623,467	17,172,788	15,752,662	14,466,898	12,357,938	10,873,181
Contract and private	84,847,710	20,048,378	17,850,092	15,965,224	15,806,831	15,177,185
Petroleum products:						
Contract and private	338,518,737	83,394,941	72,910,671	67,023,765	60,247,327	54,942,033
Noncontiguous trade:						
General cargo:						
Common	20,639,202	4,879,058	4,579,983	4,166,107	4,023,437	2,990,617
Contract and private	734,733	177,135	192,121	80,769	143,416	141,292
Total all trades:						
General cargo	176,845,112	42,277,359	38,374,858	34,678,998	32,331,622	29,182,275
Petroleum products	338,518,737	83,394,941	72,910,671	67,023,765	60,247,327	54,942,033
Grand total	515,363,849	125,672,300	111,285,529	101,702,763	92,578,949	84,124,308

[1] See footnote 1, pp. 55, 56, and 57.

APPENDIX 8

Summary of payable tons carried in coastwise, intercoastal, and noncontiguous trades, 1933–37 [1]

[General cargo in short tons]

	Total	1937	1936	1935	1934	1933
Coastwise trade	48, 625, 700	11, 272, 268	10, 586, 774	9, 959, 399	8, 605, 648	8, 201, 611
Intercoastal trade	21, 997, 767	5, 900, 520	5, 165, 888	4, 507, 499	3, 752, 290	2, 671, 570
Noncontiguous trade	20, 639, 202	4, 879, 058	4, 579, 983	4, 166, 107	4, 023, 437	2, 990, 617
Total all trades	91, 262, 669	22, 051, 846	20, 332, 645	18, 633, 005	16, 381, 375	13, 863, 798

[1] See footnote 1, pp. 55, 56, and 57.

APPENDIX 9

Summary statement showing payable tons of petroleum products and general cargo carried by private and contract steamship companies in coastwise, intercoastal, and noncontiguous trades, 1933–37 [1]

[Petroleum products and general cargo in short tons]

	Total	1937	1936	1935	1934	1933
Coastwise and intercoastal trades:						
Tankers	338, 518, 737	83, 394, 941	72, 910, 671	67, 023, 765	60, 247, 327	54, 942, 033
General cargo vessels	70, 623, 467	17, 172, 788	15, 752, 662	14, 466, 898	12, 357, 938	10, 873, 181
Noncontiguous trade: General cargo vessels	20, 639, 202	4, 879, 058	4, 579, 983	4, 166, 107	4, 023, 437	2, 990, 617
Total, all trades	429, 781, 406	105, 446, 787	93, 243, 316	85, 656, 770	76, 628, 702	68, 805, 831

[1] See footnote 1, pp. 55, 56, and 57.

APPENDIX 10

Statement showing payable tons carried in Atlantic-Gulf and Pacific coastwise trades, also noncontiguous trade, 1933–37 [1]

[General cargo in short tons]

	Total	1937	1936	1935	1934	1933
Coastwise trade:						
Company 1	5, 923, 870	1, 274, 188	1, 243, 925	1, 215, 754	1, 098, 452	1, 091, 551
Company 2	5, 499, 104	1, 123, 774	1, 182, 517	1, 075, 155	1, 047, 076	1, 070, 582
Company 3	5, 471, 895	1, 122, 263	1, 176, 073	1, 090, 443	1, 063, 845	1, 019, 271
Company 4	4, 890, 237	1, 124, 987	1, 090, 214	1, 033, 084	727, 357	914, 595
Company 5	4, 729, 675	1, 390, 235	1, 061, 850	820, 590	764, 753	692, 247
Company 6	3, 197, 814	44, 826	582, 338	917, 838	761, 779	891, 033
Company 7	2, 714, 532	753, 180	612, 373	570, 662	453, 363	324, 954
Company 8	2, 361, 184	800, 011	472, 693	437, 307	277, 890	373, 283
Company 9	2, 220, 356	545, 789	478, 835	423, 844	413, 012	358, 876
Company 10	1, 813, 178	359, 126	421, 929	361, 460	339, 463	331, 200
Company 11	1, 649, 180	640, 381	429, 231	322, 438	257, 130	NS
Company 12	1, 381, 931	341, 581	302, 107	202, 010	260, 599	275, 634
Company 13	845, 966	218, 297	171, 202	204, 322	223, 688	28, 457
Company 14	785, 600	157, 387	175, 473	168, 519	161, 306	122, 915
Company 15	690, 327	340, 874	214, 951	126, 004	8, 498	NS
Company 16	685, 649	200, 522	183, 644	191, 319	110, 164	NS
Company 17	557, 886	115, 190	98, 935	109, 252	114, 456	120, 053
Company 18	551, 899	108, 728	109, 321	121, 497	88, 236	124, 117
Company 19	513, 913	142, 183	79, 950	99, 001	66, 848	125, 931
Company 20	431, 925	106, 620	100, 331	109, 970	64, 713	50, 291
Company 21	407, 703	98, 371	91, 719	96, 402	66, 490	54, 721
Company 22	396, 974	70, 685	63, 703	102, 541	80, 802	79, 243

[1] Source: Reports submitted by steamship companies, comprising the principal common carrier lines, filing annual financial reports with the Maritime Commission and classified as coastwise operators.

Statement showing payable tons carried in Atlantic-Gulf and Pacific coastwise trades, also noncontiguous trade, 1933–37—Continued

[General cargo in short tons]

	Total	1937	1936	1935	1934	1933
Coastwise trode—Continued.						
Company 23	296,025	35,132	100,870	44,960	48,746	66,317
Company 24	252,092	57,861	46,420	70,036	57,968	19,807
Company 25	247,519	52,428	34,553	44,991	49,014	66,533
Company 26	109,266	47,649	61,617	NS	NS	NS
Total	48,625,700	11,272,268	10,586,774	[2] 9,959,399	[3] 8,605,648	[3] 8,201,611
Noncontiguous trade:						
Company 27	10,823,845	2,457,906	2,304,151	2,205,995	1,965,639	1,890,154
Company 28	4,025,749	947,934	872,654	736,884	871,392	596,885
Company 29	2,068,775	593,744	522,530	464,317	488,184	NS
Company 30	1,824,160	444,553	435,796	365,194	331,928	246,689
Company 31	1,541,091	362,736	344,905	310,584	265,977	256,889
Company 32	355,582	72,185	99,947	83,133	100,317	NS
Total	20,639,202	4,879,058	4,579,983	4,166,107	4,023,437	[4] 2,990,617
Grand total	69,264,902	16,151,326	15,166,757	14,125,506	12,629,085	11,192,228

[2] Total for 25 companies.
[3] Total for 22 companies.
[4] Total for 4 companies.

Appendix 11

Statement showing payable tons carried in intercoastal trade, 1933–37 [1]

[General cargo in short tons]

	Total	1937	1936	1935	1934	1933
Intercoastal trade:						
Company 1	5,580,789	1,536,084	1,084,999	1,091,804	898,099	969,803
Company 2	3,033,140	740,190	872,790	772,896	647,264	NS
Company 3	2,356,712	589,177	456,123	489,068	384,453	437,891
Company 4	2,229,897	504,671	572,643	469,860	388,619	294,104
Company 5	1,909,624	448,740	364,833	369,363	363,015	363,673
Company 6	1,482,954	403,109	323,514	391,813	364,518	NS
Company 7	1,236,698	345,792	284,362	264,653	155,775	186,116
Company 8	1,207,717	450,835	265,735	262,987	192,760	35,400
Company 9	955,619	443,124	512,495	NS	NS	NS
Company 10	909,902	210,343	193,267	189,467	157,977	158,848
Company 11	888,154	189,330	190,285	163,318	161,610	183,611
Company 12	206,561	39,125	44,842	42,270	38,200	42,124
Total	21,997,767	5,900,520	5,165,888	[2] 4,507,499	[2] 3,752,290	[3] 2,671,570

[1] Source: Reports submitted by steamship companies comprising the principal common carrier lines, filing annual financial reports with the Maritime Commission and classified as intercoastal operators.
[2] Total for 11 companies.
[3] Total for 9 companies.

APPENDIX 12

Statement showing payable tons carried by private and contract steamship companies in coastwise, intercoastal, and noncontiguous trades, 1933–37 [1]

[General cargo in short tons]

	Total	1937	1936	1935	1934	1933
Coastwise and intercoastal trades:						
Company 1	30,245,222	6,431,122	5,983,179	5,835,734	6,047,651	5,947,536
Company 2	11,934,249	2,146,887	2,427,171	2,175,374	2,479,447	2,705,370
Company 3	9,025,851	1,978,881	1,796,350	1,688,197	1,698,791	1,863,632
Company 4	5,443,600	1,192,800	1,062,000	989,200	1,184,400	1,015,200
Company 5	2,183,685	969,946	897,727	316,012	NS	NS
Company 6	3,261,943	743,203	785,390	634,577	576,581	522,192
Company 7	1,921,068	743,014	521,763	350,964	305,327	NS
Company 8	735,342	187,425	185,920	164,330	103,211	94,456
Company 9	2,889,938	653,843	578,109	592,362	490,850	574,774
Company 10	3,364,380	615,910	729,669	664,935	660,557	693,309
Company 11	2,487,295	582,044	524,380	518,151	422,797	439,923
Company 12	393,632	114,906	159,705	86,788	32,233	NS
Company 13	369,113	369,113	NS	NS	NS	NS
Company 14	1,553,812	331,470	292,198	318,349	274,851	336,944
Company 15	306,100	306,100	NS	NS	NS	NS
Company 16	272,367	272,367	NS	NS	NS	NS
Company 17	885,778	208,856	202,480	235,833	238,609	NS
Company 18	637,619	205,089	186,962	NS	245,568	NS
Company 19	198,842	198,842	NS	NS	NS	NS
Company 20	984,972	190,518	191,167	204,016	164,863	234,408
Company 21	1,008,841	173,037	189,052	199,658	219,902	227,192
Company 22	498,059	124,950	122,400	124,950	69,659	56,100
Company 23	113,790	113,790	NS	NS	NS	NS
Company 24	352,104	110,158	56,236	63,047	67,111	55,552
Company 25	478,043	103,652	97,887	86,362	98,203	91,939
Company 26	152,797	94,896	57,901	NS	NS	NS
Company 27	404,673	81,325	216,740	106,608	NS	NS
Company 28	116,837	79,645	37,192	NS	NS	NS
Company 29	396,974	70,685	63,703	102,541	80,802	79,243
Company 30	138,026	66,848	56,226	14,952	NS	NS
Company 31	462,177	63,201	86,240	165,940	65,729	81,067
Company 32	59,522	59,522	NS	NS	NS	NS
Company 33	160,430	51,699	52,284	42,463	13,984	NS
Company 34	249,356	49,581	57,037	33,978	43,416	65,344
Company 35	46,500	46,500	NS	NS	NS	NS
Company 36	130,812	42,475	23,425	45,265	19,647	NS
Company 37	78,293	41,727	36,566	NS	NS	NS
Company 38	211,907	35,667	35,040	69,053	69,017	3,130
Company 39	35,588	35,588	NS	NS	NS	NS
Company 40	235,348	34,355	32,390	63,396	70,482	34,725
Company 41	30,694	30,694	NS	NS	NS	NS
Company 42	49,379	30,355	19,024	NS	NS	NS
Company 43	257,752	21,192	50,579	70,689	61,643	53,649
Company 44	52,000	17,500	34,500	NS	NS	NS
Company 45	13,500	13,500	NS	NS	NS	NS
Company 46	12,000	12,000	NS	NS	NS	NS
Company 47	7,500	1,500	1,500	1,500	1,500	1,500
Total, coastwise and intercoastal	84,847,710	20,048,378	[2] 17,850,092	[3] 15,965,224	[4] 15,806,831	[5] 15,177,185
Noncontiguous trades:						
Company 48	193,629	58,840	46,976	29,510	33,024	25,279
Company 49	263,470	49,806	60,410	14,729	63,536	74,989
Company 50	194,022	42,233	48,783	29,090	39,755	34,161
Company 51	47,970	17,138	27,188	3,644	NS	NS
Company 52	20,756	5,842	4,864	3,796	3,201	3,053
Company 53	14,886	3,276	3,900	NS	3,900	3,810
Total, noncontiguous	734,733	177,135	192,121	[6] 80,769	[6] 143,416	[6] 141,292
Grand total	85,582,443	20,225,513	18,042,213	16,045,993	15,950,247	15,318,477

[1] Source: Reports submitted by private and contract carriers in connection with the economic survey of coastwise and intercoastal trades.
[2] Total for 36 companies.
[3] Total for 30 companies.
[4] Total for 28 companies.
[5] Total for 22 companies.
[6] Total for 5 companies.

Appendix 13

Statement showing tanker petroleum products traffic as reported by oil companies, 1933–37 [1]

[In short tons]

	Total	1937	1936	1935	1934	1933
Private and contract carriers:						
Company 1	84,559,104	18,744,558	17,496,528	17,746,134	16,030,497	14,541,387
Company 2	34,970,700	8,616,849	7,646,649	6,963,937	6,591,072	5,152,193
Company 3	31,883,720	7,573,655	7,412,558	6,942,454	4,819,002	5,136,051
Company 4	27,454,418	6,379,290	6,394,901	5,472,240	4,859,876	4,348,111
Company 5	18,175,000	3,775,000	4,050,000	3,475,000	3,325,000	3,550,000
Company 6	17,993,886	3,734,336	3,966,872	3,685,704	3,416,795	3,190,179
Company 7	14,404,781	3,181,012	2,948,016	2,786,881	2,634,701	2,854,171
Company 8	13,766,014	3,586,890	3,440,233	2,449,128	2,407,760	1,882,003
Company 9	12,741,472	3,802,047	3,577,376	2,487,007	1,843,957	1,031,085
Company 10	12,419,484	2,229,960	2,576,983	2,281,509	2,539,021	2,792,011
Company 11	11,936,938	2,540,580	2,386,944	2,336,961	2,320,056	2,352,397
Company 12	11,844,952	2,470,325	2,376,079	2,380,871	2,353,496	2,264,181
Company 13	11,518,071	2,646,216	2,263,602	2,202,147	2,292,606	2,113,500
Company 14	9,536,167	2,298,414	1,997,531	1,880,440	1,841,409	1,518,373
Company 15	4,985,692	4,985,692	NS	NS	NS	NS
Company 16	4,079,470	971,717	896,558	820,371	713,899	676,925
Company 17	3,616,200	1,793,400	1,058,400	764,400	NS	NS
Company 18	2,961,600	677,600	661,000	687,000	553,700	382,300
Company 19	2,863,187	452,062	507,583	654,379	705,868	543,295
Company 20	2,178,400	560,000	560,000	448,000	358,400	252,000
Company 21	1,672,581	385,731	422,350	242,761	361,933	259,806
Company 22	1,473,528	1,473,528	NS	NS	NS	NS
Company 23	963,750	361,010	164,350	148,565	187,760	102,065
Company 24	257,237	37,526	66,350	76,059	77,302	NS
Company 25	176,590	52,510	32,668	78,195	13,217	NS
Company 26	85,795	65,033	7,140	13,622	NS	NS
Total	338,518,737	83,394,941	[2] 72,910,671	[2] 67,023,765	[3] 60,247,327	[4] 54,942,033

[1] Source: Reports submitted by private and contract carriers to the Maritime Commission in connection with the economic survey of coastwise and intercoastal trades.
[2] Total for 24 companies.
[3] Total for 22 companies.
[4] Total for 20 companies.

Appendix 14

Passenger Movements in the Domestic Water-Borne Traffic of the United States

[Source: U. S. Maritime Commission Report No. 157, 1933–37; Corps of Engineers, U. S. Army]

1. *The trend of the water-borne passenger traffic of the United States.*—The total movement of passengers in the water-borne traffic of the United States was 3,744,131 passengers in 1937. Of this total, 1,961,334 passengers represented foreign traffic, 122,092 passengers noncontiguous traffic, 21,560 passengers intercoastal traffic, and 1,639,145 passengers coastwise traffic. The coastwise movement of passengers as treated in this report is restricted to seaports, not including lake and river traffic. It is shown from these figures that in 1937 foreign traffic included 52.4 percent of the total passengers; coastwise traffic, 43.7 percent; noncontiguous traffic, 3.3 percent; and intercoastal traffic, 0.6 percent.

However, it should be emphasized that figures giving the total number of passengers traveling in different classes of traffic during a period, with no indication of the distance traveled, are not comparable in ascertaining the relative importance of the movements. For such comparison and analysis the passenger-mile unit is needed. This was

not available for the report. The distances traveled by passengers in coastwise traffic in the United States were much shorter than in the other classes of traffic, so its large total may be misleading, when considered with the others.

It should likewise be pointed out that passenger movements are reported both as out-bound and in-bound movements by the respective ports from which the passengers depart and at which they arrive. Hence, the total of such a movement for the entire district within which the movement took place would include a double recording of it. Most of the passengers in foreign and noncontiguous traffic make a round trip, so their movements would be recorded by the ports both of departure and arrival.

The trend of the foreign, noncontiguous, and intercoastal passenger traffic of the United States has been analyzed over the 5-year period, 1933–37. Data were not available for the coastwise passenger traffic during this period. This analysis shows that the total of the foreign, noncontiguous, and intercoastal traffic increased from 1,419,785 passengers in 1933 to 2,104,986 passengers in 1937, or 48.3 percent. During the same period the foreign traffic increased from 1,334,377 passengers in 1933 to 1,961,334 passengers in 1937, or 47 percent; the noncontiguous traffic from 65,818 passengers in 1933 to 122,092 passengers in 1937, or 85.5 percent; and the intercoastal traffic from 19,590 passengers in 1933 to 21,560 passengers in 1937, or 10.1 percent. The average annual movement during this 5-year period was 1,692,356 passengers for the total of the three classes, 1,571,828 passengers for the foreign traffic, 98,100 passengers for the noncontiguous traffic, and 22,428 passengers for the intercoastal traffic.

2. *Coastwise passenger movements.*—The coastwise movement of passengers centers in New York. Of the total of 1,639,145 passengers in the coastwise traffic in 1937, 938,147 passengers, or 57.2 percent, represented passenger traffic at New York. The heaviest movement of the New York coastwise passenger traffic is with New England. The reports show that a total of 837,265 passengers moved between New York and New England points in 1937. This constituted 89.2 percent of New York's coastwise traffic. Of this number, 206,083 passengers departed for or arrived from Boston. The total for Providence was smaller, with other New England points having 622,189 passengers.

The next heaviest coastwise passenger movements of New York in 1937 were with Norfolk and Miami, with totals of 36,272 passengers and 24,072 passengers, respectively. Other movements included Jacksonville, with 13,730 passengers, Charleston, with 8,395 passengers, Savannah, with 7,698 passengers, New Orleans, with 5,958 passengers, and Galveston, with 4,596 passengers.

Boston had the next largest total of coastwise passenger traffic in 1937, consisting of 244,414 passengers. However, five-sixths of Boston's passenger traffic was with New York. Its next largest movements were with Baltimore, Philadelphia, and Norfolk, with totals of 13,489 passengers, 9,044 passengers, and 6,363 passengers, respectively. There were smaller passenger movements between Boston and Jacksonville and Miami.

Norfolk had the next largest coastwise passenger movement, which included 187,860 passengers in 1937. The largest part of this movement was with Baltimore, and consisted of 139,292 passengers. The

movements with New York and Boston have been noted. There was a smaller movement from Norfolk to other ports of New England.

Baltimore had the next largest number of passengers engaged in the coastwise traffic, 166,708 passengers. The largest number of these were in the Norfolk movement. Boston took the next largest number from Baltimore, followed by Miami, with 7,943 passengers, Jacksonville, with 4,751 passengers, and Savannah, with 1,233 passengers.

Providence had a coastwise passenger movement of 133,899 passengers, divided between New York and New England points.

Miami, Jacksonville, Savannah, and Charleston had smaller coastwise passenger movements. These amounted to 34,846 passengers for Miami, 23,603 passengers for Jacksonville, 17,982 passengers for Savannah, and 11,010 passengers for Charleston. About two-thirds of the passenger traffic of these ports was with New York. There were smaller movements between these cities and Baltimore, Norfolk, and New Orleans. These South Atlantic ports had a small passenger traffic with each other.

Philadelphia had a coastwise passenger movement of 11,616 passengers. Most of this was with Boston, a small part being with the South Atlantic ports.

New Orleans and Galveston reported totals of each coastwise traffic of about 7,000 passengers, most of it being with New York.

Tampa reported a small movement with Key West, and Mobile a very small movement with Philadelphia and Tampa.

There was a large movement of passengers between the smaller New England ports, but because of its localized nature, this was not included in the coastwise total used in this report.

No regular coastwise passenger service is operated on the Pacific coast. Freight vessels in this service occasionally carry passengers. It is reported that foreign vessels transport a large number of passengers between the California ports, Los Angeles, and San Francisco, and Vancouver, Canada, from which point they travel to Seattle, a comparatively short distance away, by train or bus.

3. *Intercoastal passenger movements.*—The intercoastal passenger movement of the United States is almost entirely a case of passenger traffic moving between New York in the East and Los Angeles and San Francisco in the West. An analysis of a 5-year movement of passenger traffic, including the years 1933–37, disclosed that 96 percent of the entire intercoastal passenger traffic was between the ports named. The total average annual movement of passengers in intercoastal traffic during this period was 22,428 passengers. The average annual intercoastal passenger movement for this period between New York and Los Angeles was 10,883 passengers, and between New York and San Francisco, 10,653 passengers, a total of 21,536 passengers.

Besides the passengers included in the traffic with Los Angeles and San Francisco, New York had an annual average of 782 passengers with other Pacific coast ports. The largest part of this traffic was with San Diego, with an average of 596 passengers, and with Seattle, with an average of 179 passengers. There was a small intercoastal passenger movement with Portland.

Among eastern ports, Philadelphia had the next largest intercoastal passenger traffic, with an annual average of 65 passengers. Los

Angeles accounted for 34 of these, and San Francisco for 24. A very few went to Seattle and Portland.

Boston had an annual average of 15 intercoastal passengers, 7 with San Francisco, 6 with Los Angeles, and 1 each with Seattle and Portland. New Orleans had an annual average of 15 intercoastal passengers, 7 with Los Angeles, 6 with San Francisco, and 2 with Seattle. There were only a very small number of intercoastal passengers from other eastern ports.

As has been noted, Los Angeles and San Francisco have most of the intercoastal passenger traffic of the Pacific coast. Los Angeles had an average annual movement over the 5-year period of 10,936 passengers, while San Francisco had an average annual movement of 10,698 passengers, a sum of 21,634 passengers. This is 96.5 percent of the total average annual intercoastal movement. As has been stated, the intercoastal passenger movement between Los Angeles and San Francisco and New York was 10,883 passengers and 10,653 passengers, respectively, which does not leave many for the other ports. Los Angeles exchanged an average of 34 passengers with Philadelphia, 7 with New Orleans, and 6 with Boston. There was a small passenger movement with several other eastern ports.

Besides its large passenger traffic with New York, San Francisco had an intercoastal passenger movement with Philadelphia of 24 passengers, with Boston of 8, and with New Orleans of 6 passengers in the period under discussion. There were several with other eastern ports.

Seattle had the next largest intercoastal passenger traffic, with an annual average of 188 passengers. Of this number, 179 were included in the movement with New York. A few went to Philadelphia. Portland had a very small average annual intercoastal passenger movement, and other Pacific ports a few intercoastal passengers.

4. *Noncontiguous passenger movements.*—The noncontiguous passenger movement between ports of the United States and the Territories might be considered as taking three principal directions. In the east there is a movement from New York to Puerto Rico. In the west there are two movements, one from Los Angeles and San Francisco to Hawaii, and the other from Seattle to Alaska. An analysis of a 5-year movement of the noncontiguous passenger traffic, including the period 1933–37, showed 81.2 percent of the entire noncontiguous passenger traffic to be between the ports named. The total average annual movement of passengers in noncontiguous traffic during this period was 98,100 passengers. The combined average annual noncontiguous passenger movement in the three major directions indicated was 79,623 passengers.

The movement from the California ports to Hawaii and from Seattle to Alaska are the leading ones, being about equal. Over this 5-year period, there was an average of 17,277 passengers in the traffic between Los Angeles and Hawaii, and 16,986 passengers between San Francisco and Hawaii, or a combined average movement of 34,263 passengers between California ports and Hawaii. In the passenger movement from Seattle to Alaska there was an average annual movement of 34,477 passengers in the period. The noncontiguous passenger movement between New York and Puerto Rico ranks third in these movements, with an annual average of 10,883

passengers. From these figures it can be seen that the Seattle-Alaska passenger movement comprised 35.1 percent of the total noncontiguous passenger movement; the California-Hawaii movement 34.9 percent; and the New York-Puerto Rico movement 11.2 percent; during the years 1933–37.

In the east there is a smaller passenger movement between a number of ports other than New York and Puerto Rico. Baltimore had an average annual movement with Puerto Rico of 655 passengers, and Phialdelphia of 525 passengers, in the period considered. New Orleans had an annual average of 187 passengers, Galveston of 136 passengers, Mobile of 121 passengers, and Tampa of 112 passengers, in the Puerto Rican passenger traffic. There was a smaller annual average passenger movement with Puerto Rico of 45 passengers for Houston, 41 passengers for Jacksonville, 28 passengers for Port Arthur, 17 passengers for Norfolk, 15 passengers for Charleston, 9 passengers for Savannah, 7 passengers for Miami, and 4 passengers for Boston. Occasional small passenger movements from other eastern ports to Puerto Rico have taken place from time to time.

There is a minor passenger movement between New York and Hawaii, which had an average of 253 passengers for this period. Boston had a few passengers for Hawaii.

Besides the major passenger movements indicated in the west, there is a smaller movement between Tacoma and Alaska, and Bellingham and Alaska which consisted of 626 passengers annually, and 197 passengers annually, respectively, in the period under review. There is also a minor passenger movement from the Pacific coast to Samoa, which for Los Angeles included an annual average of 233 passengers, and for San Francisco, of 195 passengers. A very small number of passengers traveled between Los Angeles and San Francisco, and Puerto Rico, in this period.

In the 5-year period, 1933–37, there was a large increase in the number of passengers in the three major noncontiguous movements. The passenger movement between Seattle and Alaska increased from 23,967 passengers to 47,178 passengers, an increase of 96.6 percent in the 5 years. The passenger movement between Los Angeles and Hawaii increased from 9,334 to 19,957 passengers, and the movement between San Francisco and Hawaii increased from 12,494 to 21,554 passengers, a combined increase of 90.2 percent in the California-Hawaii passenger movement over the 5 years. The passenger movement between New York and Puerto Rico increased from 16,961 passengers in 1933 to 28,290 passengers in 1937, an increase of 66.8 percent in the 5-year period.

Data shown on the following tables, appendixes 15, 16, and 17, from which the charts were drawn, were obtained from reports submitted by steamship companies, comprising the principal common carrier lines, filing annual financial reports with the Maritime Commission and classified as coastwise and intercoastal operators.

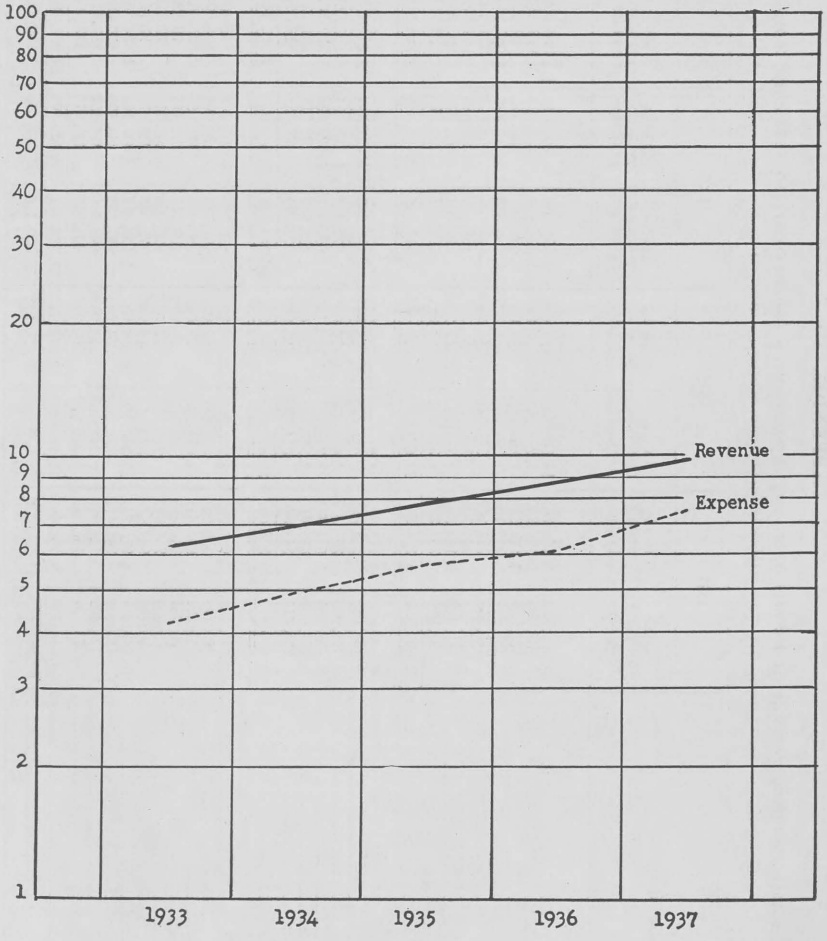
APPENDIX 15

Statement showing vessel-operating revenue and vessel-operating expense of 24 common-carrier steamship companies operating in the coastwise and intercoastal trades, 1933–37

Steamship line	1933		1934		1935		1936		1937	
	Vessel-operating revenue	Vessel-operating expense	Vessel-operating revenue	Vessel-operating expense	Vessel-operating revenue	Vessel-operating expense	Vessel-operating revenue	Vessel-operating expense	Vessel-operating revenue	Vessel-operating expense
Intercoastal trade:										
Company 1	$9,057,834	$5,478,793	$8,620,666	$5,768,404	$10,594,950	$7,566,348	$11,323,909	$7,625,048	$16,025,908	$11,664,003
Company 2	2,288,498	1,611,366	3,248,264	2,579,631	4,027,924	3,254,308	4,973,183	3,775,856	4,388,086	3,500,856
Company 3	2,513,510	2,119,991	1,852,643	1,775,021	2,088,381	1,939,425	2,522,128	2,205,486	3,151,708	2,775,961
Company 4	3,302,241	2,996,120	3,284,903	3,203,350	4,703,528	4,610,890	4,087,287	3,617,671	5,459,471	4,842,579
Company 5	345,553	262,242	311,031	245,285	343,821	289,049	254,490	213,185	378,242	329,995
Company 6	1,107,451	983,139	1,178,133	1,201,147	1,405,512	1,254,580	1,942,271	1,703,857	1,849,098	1,771,307
Company 7	2,785,088	2,136,542	2,835,002	2,171,228	2,840,303	2,403,209	2,990,338	2,549,332	3,815,545	3,373,250
Company 8	221,987	203,353	1,333,394	1,168,366	1,609,427	1,450,575	1,735,212	1,505,555	2,948,571	2,813,745
Total	21,622,162	15,791,546	22,664,036	18,112,432	27,613,846	22,768,384	29,828,818	23,195,990	38,016,629	31,071,696
Atlantic-Gulf trade:										
Company 9	7,026,619	5,351,103	7,776,868	6,325,242	8,879,262	7,385,335	10,114,356	8,201,066	11,317,836	9,397,524
Company 10	7,527,044	4,848,988	7,733,942	5,389,373	8,091,680	5,681,675	8,319,152	5,767,008	7,838,482	6,030,512
Company 11	6,770,603	3,761,579	7,496,676	4,570,031	7,672,424	4,421,391	8,253,057	4,817,128	7,540,616	4,984,518
Company 12	2,438,951	1,531,411	2,748,464	1,696,128	2,890,432	1,828,293	3,379,767	2,084,386	3,358,723	2,157,983
Company 13	1,259,908	658,416	1,259,688	584,658	1,338,861	732,713	1,491,738	720,739	1,203,095	753,382
Company 14	396,419	349,590	514,366	428,933	577,274	473,432	718,078	610,010	1,012,873	862,646
Total	25,419,544	16,501,087	27,530,004	18,994,365	29,449,933	20,522,839	32,276,148	22,200,337	32,271,625	24,186,565
Pacific coast trade:										
Company 15	2,635,559	1,935,780	3,733,066	2,838,789	4,812,583	3,301,268	5,642,103	4,020,227	6,561,483	4,612,583
Company 16	69,179	40,938	80,841	57,950	107,774	71,695	94,398	61,441	149,417	91,262
Company 17	1,951,227	806,431	2,084,338	874,042	2,186,098	943,650	2,385,401	1,067,045	2,549,839	1,218,400
Company 18	150,264	146,487	102,204	99,635	104,759	103,118	76,628	75,615	154,065	148,949
Company 19	360,304	250,047	227,467	175,527	323,093	260,412	272,722	207,371	462,787	387,989
Company 20	1,040,146	922,916	880,316	859,953	772,388	725,379	777,742	731,914	924,262	808,035
Company 21	8,268,844	4,975,314	10,805,186	6,618,930	11,512,397	7,007,440	13,204,668	8,617,069	15,568,723	11,016,197
Company 22	423,936	344,577	330,267	354,542	497,832	483,490	476,688	468,985	473,186	466,411
Company 23	174,469	132,678	244,565	232,269	393,540	374,482	387,115	375,268	446,284	429,411
Company 24	175,832	146,935	255,670	260,798	457,947	431,911	433,920	427,864	464,457	448,610
Total	15,249,760	9,702,103	18,743,920	12,372,435	21,168,411	13,702,845	23,751,385	16,052,799	27,754,503	19,627,847
Grand total	62,291,466	41,994,736	68,937,960	49,479,232	78,232,190	56,994,068	85,856,351	61,449,126	98,042,757	74,886,108

CHART I.—*Vessel operating revenue and vessel operating expense of 24 common carrier steamship companies operating in the coastwise and intercoastal trades: 1933–37*

[Expressed in units of $10,000,000]



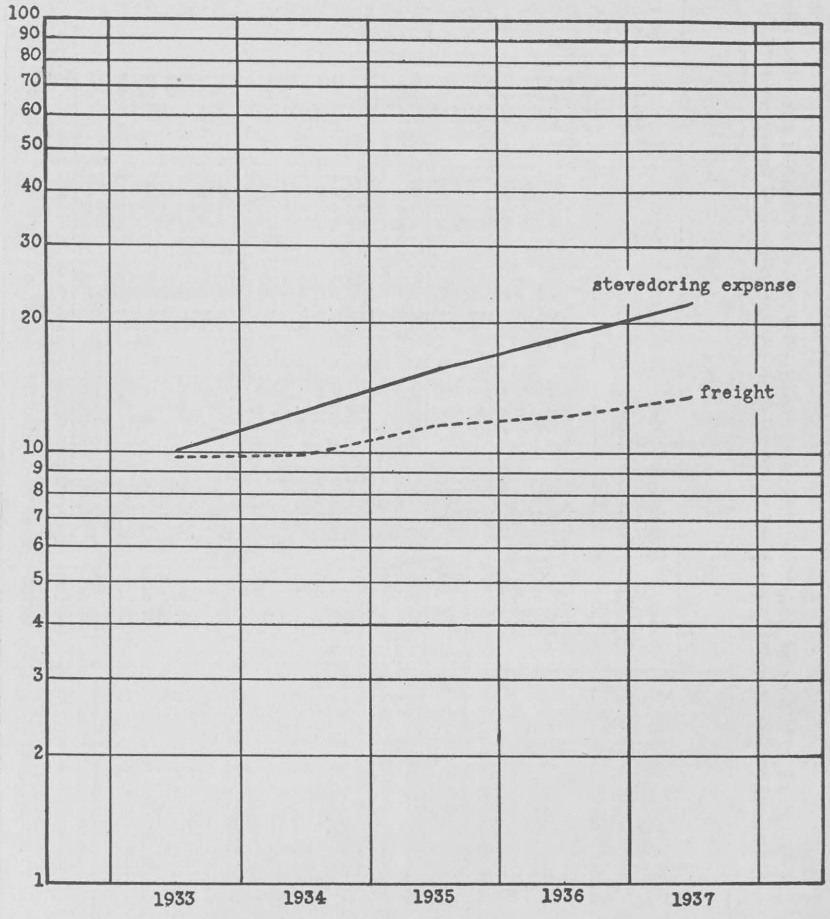
APPENDIX 16

Statement showing number of payable tons of freight carried; also stevedoring expense (straight time and overtime, terminated voyages), of 23 common-carrier steamship companies operating in the coastwise and intercoastal trades, 1933–37

	1933		1934		1935		1936		1937	
	Stevedoring expense	Payable freight carried	Stevedoring expense	Payable freight carried	Stevedoring expense	Payable freight carried	Stevedoring expense	Payable freight carried	Stevedoring expense	Payable freight carried
	Dollars	*Short tons*	*Dollars*	*Short tons*	*Dollars*	*Short tons*	*Dollars*	*Short tons*	*Dollars*	*Short tons*
Intercoastal trade:										
Company 1	1,805,779	1,086,179	2,012,881	1,005,871	2,954,409	1,222,821	3,306,502	1,215,199	4,574,632	1,720,414
Company 2	421,332	329,396	684,232	435,253	953,410	526,244	1,182,010	641,360	1,058,607	565,232
Company 3	282,865	208,450	500,576	174,468	556,685	296,411	735,202	318,485	1,113,694	387,287
Company 4	879,802	490,438	860,049	430,587	1,290,940	547,756	1,338,623	510,858	1,862,959	659,878
Company 5	75,578	47,179	86,644	42,784	106,683	48,126	76,480	50,224	119,610	43,820
Company 6	287,537	205,644	396,670	181,003	384,985	182,916	551,075	213,119	505,210	212,050
Company 7	531,131	407,314	623,506	406,577	678,294	413,687	731,383	408,613	922,031	502,589
Company 8	52,082	39,649	357,706	215,892	441,834	294,545	439,341	297,623	739,556	504,934
Total	4,336,106	2,814,249	5,522,264	2,892,435	7,367,240	3,532,506	8,360,616	3,655,481	10,896,299	4,596,204
Atlantic-Gulf trade:										
Company 9	869,895	914,595	983,198	727,357	1,351,356	1,033,084	1,510,088	1,090,214	1,646,657	1,124,987
Company 10	1,104,330	1,091,551	1,189,351	1,098,452	1,452,352	1,215,754	1,637,499	1,243,925	1,843,272	1,274,188
Company 11	1,115,285	1,019,271	1,371,811	1,063,845	1,394,475	1,090,443	1,548,369	1,176,073	1,750,576	1,122,263
Company 12	341,020	358,876	426,105	413,012	455,925	423,844	578,301	478,835	731,444	545,789
Company 13	248,373	331,200	281,694	339,463	345,208	361,460	440,768	421,929	499,781	359,126
Company 14	15,753	324,954	32,336	453,363	16,328	570,662	66,512	612,373	39,739	753,180
Total	3,694,656	4,040,447	4,284,495	4,095,492	5,015,644	4,695,247	5,781,537	5,023,349	6,511,469	5,179,533
Pacific coast trade:										
Company 15	237,562	246,689	425,457	331,928	492,058	365,194	615,974	435,796	718,165	444,553
Company 16	947	19,807	6,500	57,968	15,351	70,036	24,747	46,420	45,141	57,861
Company 17	67,395	256,889	80,393	265,977	75,003	310,584	95,595	344,905	136,732	362,736
Company 18	24,969	66,533	22,176	49,014	25,223	44,991	21,113	34,553	35,315	52,428
Company 19	68,828	125,931	51,579	66,848	88,146	99,001	84,467	79,950	120,833	142,183
Company 20	1,519,006	1,890,154	1,909,924	1,965,639	2,130,653	2,205,995	3,031,177	2,304,151	3,605,480	2,457,906
Company 21	79,314	124,117	113,976	88,236	193,742	121,497	197,636	109,321	173,295	108,728
Company 22	27,664	54,721	69,419	66,490	143,814	96,402	159,987	91,719	204,652	98,371
Company 23	33,545	50,231	93,527	64,713	190,093	109,970	199,569	100,331	214,178	106,620
Total	2,059,230	2,835,072	2,772,951	2,956,813	3,354,083	3,423,670	4,430,265	3,547,146	5,253,791	3,831,386
Grand total	10,089,992	9,689,768	12,579,710	9,944,740	15,736,967	11,651,423	18,572,418	12,225,976	22,661,559	13,607,123

CHART II.—*Number of payable tons of freight carried; also stevedoring expense (straight-time and overtime, terminated voyages), for 23 common carrier steamship companies operating in the coastwise and intercoastal trades: 1933–37*

[Freight in units of 1,000,000 short tons; stevedoring expense in units of $1,000,000]



APPENDIX 17

Statement showing vessel-operating revenue, vessel-operating expense, and wage expense (straight time and overtime), of 20 common-carrier steamship companies operating in the coastwise and intercoastal trades, 1933–37

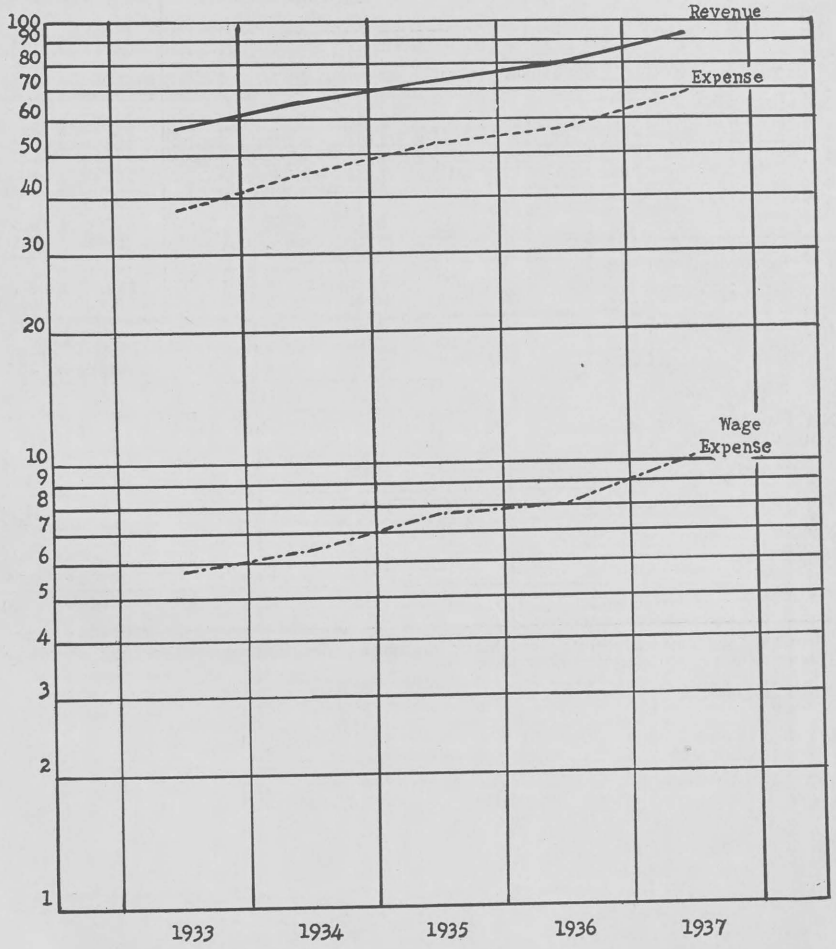
	1933			1934			1935		
	Vessel-operating revenue	Vessel-operating expense	Wage expense	Vessel-operating revenue	Vessel-operating expense	Wage expense	Vessel-operating revenue	Vessel-operating expense	Wage expense
Intercoastal trade:									
Company 1	$9,057,834	$5,478,793	$788,182	$8,620,666	$5,768,404	$747,866	$10,594,950	$7,566,348	$1,006,772
Company 2	2,288,498	1,611,366	168,894	3,248,264	2,579,631	266,432	4,027,924	3,254,308	360,143
Company 3	3,302,241	2,996,120	340,717	3,284,903	3,203,350	314,953	4,703,528	4,610,890	480,027
Company 4	2,785,088	2,136,542	273,285	2,835,002	2,171,228	258,515	2,840,303	2,403,209	322,534
Company 5	221,987	203,353	23,879	1,333,394	1,168,366	126,232	1,609,427	1,450,575	145,324
Total	17,655,648	12,426,174	1,594,957	19,322,229	14,890,979	1,713,998	23,776,132	19,285,330	2,314,800
Atlantic-Gulf trade:									
Company 6	7,026,619	5,351,103	698,469	7,776,868	6,325,242	870,229	8,879,262	7,385,335	927,143
Company 7	7,527,044	4,848,988	744,887	7,733,942	5,389,373	754,485	8,091,680	5,681,675	747,658
Company 8	6,770,603	3,761,579	675,277	7,496,676	4,570,031	746,341	7,672,424	4,421,391	711,433
Company 9	2,438,951	1,531,411	276,589	2,748,464	1,696,128	280,033	2,890,432	1,828,293	319,250
Company 10	1,259,908	658,416	99,777	1,259,688	584,658	100,210	1,338,861	732,713	99,406
Company 11	396,419	349,590	99,417	514,366	428,933	107,198	577,274	473,432	121,205
Total	25,419,544	16,501,087	2,594,416	27,530,004	18,994,365	2,858,496	29,449,933	20,522,839	2,926,095
Pacific coast trade:									
Company 12	2,635,559	1,935,780	382,960	3,733,066	2,838,789	554,139	4,812,583	3,301,268	816,662
Company 13	69,179	40,938	9,520	80,841	57,950	19,815	107,774	71,695	28,650
Company 14	1,951,227	806,431	211,572	2,084,338	874,042	218,225	2,186,098	943,650	244,217
Company 15	150,264	146,487	26,848	102,204	99,635	20,999	104,759	103,118	24,524
Company 16	360,304	250,047	69,546	227,467	175,527	48,957	323,093	260,412	71,444
Company 17	8,268,844	4,975,314	635,916	10,805,186	6,618,930	838,854	11,512,397	7,007,440	939,683
Company 18	423,936	344,577	70,285	330,267	354,542	56,930	497,832	483,490	85,135
Company 19	174,469	132,678	33,779	244,565	232,269	47,810	393,540	374,482	78,352
Company 20	175,832	146,935	32,911	255,670	260,798	46,032	457,947	431,911	81,312
Total	14,209,614	8,779,187	1,473,337	17,863,604	11,512,482	1,851,761	20,396,023	12,977,466	2,369,979
Grand total	57,284,806	37,706,448	5,662,710	64,715,837	45,397,826	6,424,255	73,622,088	52,785,635	7,610,874

Statement showing vessel-operating revenue, xessel-operating expense, and wage expense (straight time ond overtime), of 20 common-carrier steamship companies operating in the coastwise and intercoastal trades, 1933–27—Continued

	1936			1937		
	Vessel-operating revenue	Vessel-operating expense	Wage expense	Vessel-operating revenue	Vessel-operating expense	Wage expense
Intercoastal trade—Continued.						
Company 1	$11,323,909	$7,625,048	$934,051	$16,025,908	$11,664,003	$1,593,825
Company 2	4,973,183	3,775,856	402,264	4,388,086	3,500,856	440,016
Company 3	4,087,287	3,617,671	470,160	5,459,471	4,842,579	619,601
Company 4	2,990,338	2,549,332	355,760	3,815,545	3,373,250	482,912
Company 5	1,735,212	1,505,555	158,232	2,948,571	2,813,745	290,281
Total	25,109,929	19,073,462	2,320,467	32,637,581	26,194,433	3,426,635
Atlantic-Gulf trade:						
Company 6	10,114,356	8,201,066	974,966	11,317,836	9,397,524	1,126,937
Company 7	8,319,152	5,767,008	793,479	7,838,482	6,030,512	836,770
Company 8	8,253,057	4,817,128	744,404	7,540,616	4,984,518	830,120
Company 9	3,379,767	2,084,386	338,423	3,358,723	2,157,983	346,744
Company 10	1,491,738	720,739	100,107	1,203,095	753,382	95,213
Company 11	718,078	610,010	152,902	1,012,873	862,646	232,224
Total	32,276,148	[22,200,337	3,104,281	32,271,625	24,186,565	3,468,008
Pacific coast trade:						
Company 12	5,642,103	4,020,227	960,095	6,561,483	4,612,583	1,188,818
Company 13	94,398	61,441	22,314	149,417	91,262	35,837
Company 14	2,385,401	1,067,045	270,840	2,549,839	1,218,400	298,184
Company 15	76,628	75,615	18,502	154,065	148,949	36,586
Company 16	272,722	207,371	52,971	462,787	387,989	115,016
Company 17	13,204,668	8,617,069	1,055,800	15,568,723	11,016,197	1,439,650
Company 18	476,688	468,985	77,036	473,186	466,411	94,798
Company 19	387,115	375,268	71,575	446,284	429,411	92,274
Company 20	433,920	427,864	70,423	464,457	448,610	93,175
Total	22,973,643	15,320,885	2,599,556	26,830,241	18,819,812	3,394,338
Grand total	80,359,720	56,594,684	8,024,304	91,739,447	69,200,810	10,288,981

CHART III.—*Vessel operating revenue, vessel operating expense, and wage expense (straight-time and overtime), of 20 common carrier steamship companies operating in the coastwise and intercoastal trades: 1933–37*

[Expressed in units of $1,000,000]



APPENDIX 18

SCHEDULE 1.—*Groups A and B—Analysis of cost, depreciation, and net book values, by age and deadweight tons, freight vessels, Dec. 31, 1937*

	Under 10 years	10–14 years	15–19 years	20–24 years	25–29 years	30 years and older	Total
Cost, as per books:							
Group A	$1,610,799	$190,712	$34,922,848	$10,510,415	$4,889,176	$4,584,400	$56,708,350
Group B	----------	109,990	26,965,603	6,824,856	2,534,092	850,898	37,285,439
Total, cost	1,610,799	300,702	61,888,451	17,335,271	7,423,268	5,435,298	93,993,789
Depreciation:							
Group A	209,140	168,261	19,884,689	9,074,121	4,780,634	4,515,199	38,632,044
Group B	----------	29,500	16,112,578	5,967,042	2,275,912	466,749	24,851,781
Total, depreciation	209,140	197,761	35,997,267	15,041,163	7,056,546	4,981,948	63,483,825
Net book values:							
Group A	1,401,659	22,451	15,038,159	1,436,294	108,542	69,201	18,076,306
Group B	----------	80,490	10,853,025	857,814	258,180	384,149	12,433,658
Total, net book values	1,401,659	102,941	25,891,184	2,294,108	366,722	453,350	30,509,964
Tonnage (deadweight):							
Group A	15,160	4,720	905,196	154,790	75,815	53,149	1,208,830
Group B	----------	2,247	944,343	104,552	34,800	19,028	1,104,970
Total, deadweight tonnage	15,160	6,967	1,849,539	259,342	110,615	72,177	2,313,800
Percent, by age	0.65	0.30	79.94	11.20	4.78	3.13	100.00
Cost per deadweight ton:							
Group A	$106.25	$40.40	$38.58	$67.90	$64.48	$86.25	$46.91
Group B	----------	48.95	28.55	65.27	72.81	44.71	33.74
Total, all ships	106.25	43.16	33.46	66.84	67.10	75.30	40.62
Net book values per deadweight ton:							
Group A	$92.46	$4.75	$16.61	$9.28	$1.43	$1.30	$14.95
Group B	----------	35.82	11.50	8.20	7.41	20.18	11.25
Average, all ships	92.46	14.77	14.00	8.84	3.31	6.28	13.19
Number of ships:							
Group A	2	2	122	20	10	8	164
Group B	----------	1	130	12	7	6	156
Total	2	3	252	32	17	14	320

Source of data: Financial reports submitted by companies to the Maritime Commission in accordance with sec. 21 of the Merchant Marine Act, 1916.

APPENDIX 19

SCHEDULE 1–A—*Coastwise, intercoastal, and noncontiguous trades analysis of cost, depreciation, and net book values by age and deadweight tons, freight vessels, Dec. 31, 1937*

	Under 10 years	10–14 years	15–19 years	20–24 years	25–29 years	30 years and older	Total
Cost:							
Coastwise	$1,610,799	$300,702	$14,067,745	$5,381,669	$3,244,489	$2,726,939	$27,332,343
Intercoastal			35,419,125	8,568,628	3,164,410	2,708,359	49,860,522
Noncontiguous			12,401,581	3,384,975	1,014,369		16,800,924
Total cost	1,610,799	300,702	61,888,451	17,335,271	7,423,268	5,435,298	93,993,789
Depreciation:							
Coastwise	209,140	197,761	6,900,158	4,695,124	2,959,749	2,279,771	17,241,703
Intercoastal			21,187,298	7,383,593	3,149,678	2,702,177	34,422,746
Noncontiguous			7,909,811	2,962,446	947,119		11,819,376
Total depreciation	209,140	197,761	35,997,267	15,041,163	7,056,546	4,981,948	63,483,825
Net book values:							
Coastwise	1,401,659	102,941	7,167,587	686,545	284,740	447,168	10,090,640
Intercoastal			14,231,827	1,185,035	14,732	6,182	15,437,776
Noncontiguous			4,491,770	422,528	67,250		4,981,548
Total net book values	1,401,659	102,941	25,891,184	2,294,108	366,722	453,350	30,509,964
Tonnage (deadweight tons):							
Coastwise	15,160	6,967	492,508	49,946	43,038	32,152	639,771
Intercoastal			1,042,787	173,053	60,577	40,025	1,316,442
Noncontiguous			314,244	36,343	7,000		357,587
Total tonnage (deadweight tons)	15,160	6,967	1,849,539	259,342	110,615	72,177	2,313,800
Percent by age	0.65	0.30	79.94	11.20	4.78	3.13	100.00
Cost per deadweight ton:							
Coastwise	$106.25	$43.16	$28.56	$107.75	$75.39	$84.81	$42.72
Intercoastal			33.97	49.51	52.24	67.67	37.88
Noncontiguous			39.46	93.14	144.91		46.98
Total, all ships	106.25	43.16	33.46	66.84	67.10	75.30	40.62
Net book values per deadweight ton:							
Coastwise	92.46	14.77	14.55	13.75	6.62	13.91	15.77
Intercoastal			13.65	6.85	.24	.15	11.73
Noncontiguous			14.29	11.63	9.61		13.93
Average all ships	92.46	14.77	14.00	8.84	3.31	6.28	13.19
Number of ships:							
Coastwise	2	3	99	11	10	11	136
Intercoastal			111	17	6	3	137
Noncontiguous			42	4	1		47
Total	2	3	252	32	17	14	320

APPENDIX 20

SCHEDULE 2.—*Groups A and B—Analysis of cost, depreciation and net book values, by age and gross tons—combination vessels*

	Under 10 years	10–14 years	15–19 years	20–24 years	25–29 years	30 years and older	Total
Cost, as per books:							
Group A	$24,118,674	$21,713,268	$2,300,915	$358,523	$987,186	$5,991,963	$55,470,529
Group B		19,119,652		1,288,409		1,325,873	21,733,934
Total cost	24,118,674	40,832,920	2,300,915	1,646,932	987,186	7,317,836	77,204,463
Depreciation:							
Group A	8,077,645	11,906,411	663,159	221,063	889,003	4,462,606	26,219,887
Group B		9,539,857		510,235		1,225,540	11,275,632
Total depreciation	8,077,645	21,446,268	663,159	731,298	889,003	5,688,146	37,495,519
Net book values:							
Group A	16,041,029	9,806,857	1,637,756	137,460	98,183	1,529,357	29,250,642
Group B		9,579,795		778,174		100,333	10,458,302
Total net book values	16,041,029	19,386,652	1,637,756	915,634	98,183	1,629,690	39,708,944
Tonnage (gross):							
Group A	38,787	84,770	41,906	6,724	6,284	30,388	208,859
Group B		56,048		16,150		13,086	85,284
Total, gross tons	38,787	140,818	41,906	22,874	6,284	43,474	294,143
Percent by ages	13.18	47.87	14.25	7.77	2.14	14.79	100.00
Cost per gross ton:							
Group A	$621.82	$256.14	$54.91	$53.31	$157.09	$197.18	$265.58
Group B		341.12		79.77		101.31	254.85
Total, cost (gross tons)	621.82	289.98	54.91	72.00	157.09	168.32	262.47
Net book values per gross ton:							
Group A	$413.56	$115.69	$39.08	$20.45	$15.62	$50.33	$140.04
Group B		170.92		48.18		7.66	122.62
Total, net book values	413.56	137.67	39.08	40.02	15.62	37.48	134.99
Number of ships:							
Group A	7	15	11	2	4	8	47
Group B		9		2		3	14
Total	7	24	11	4	4	11	61

Source of data: Financial reports submitted by companies to the Maritime Commission in accordance with sec. 21 of the Merchant Marine Act, 1916.

APPENDIX 21

SCHEDULE 2–a.—*Coastwise, intercoastal and noncontiguous trades, analysis of cost, depreciation, and net book values, by age and gross tons, combination vessels, Dec. 31, 1937*

	Under 10 years	10–14 years	15–19 years	20–24 years	25–29 years	30 years and older	Total
Cost:							
Coastwise	$12,461,893	$26,155,301	$415,196	$1,422,759	----	$1,325,873	$41,781,022
Intercoastal	----	----	----	----	----	----	----
Noncontiguous	11,656,781	14,677,619	1,885,719	224,173	$987,186	5,991,963	35,423,441
Total cost	24,118,674	40,832,920	2,300,915	1,646,932	987,186	7,317,836	77,204,463
Depreciation:							
Coastwise	4,584,257	14,099,042	142,900	597,488	----	1,225,540	20,649,227
Intercoastal	----	----	----	----	----	----	----
Noncontiguous	3,493,388	7,347,226	520,259	133,810	889,003	4,462,606	16,846,292
Total depreciation	8,077,645	21,446,268	663,159	731,298	889,003	5,688,146	37,495,519
Net book value:							
Coastwise	7,877,636	12,056,259	272,296	825,271	----	100,333	21,131,795
Intercoastal	----	----	----	----	----	----	----
Noncontiguous	8,163,393	7,330,393	1,365,460	90,363	98,183	1,529,357	18,577,149
Total net book value	16,041,029	19,386,652	1,637,756	915,634	98,183	1,629,690	39,708,944
Tonnage (gross):							
Coastwise	12,370	100,230	12,044	20,815	----	13,086	158,545
Intercoastal	----	----	----	----	----	----	----
Noncontiguous	26,417	40,588	29,862	2,059	6,284	30,388	135,598
Total gross tons	38,787	140,818	41,906	22,874	6,284	43,474	294,143
Percent by ages	13.18	47.87	14.25	7.77	2.14	14.79	100.00
Cost per gross ton:							
Coastwise	1,007.43	260.95	34.47	68.35	----	101.32	263.53
Intercoastal	----	----	----	----	----	----	----
Noncontiguous	441.26	361.62	63.15	108.87	157.09	197.18	261.24
Total cost, gross tons	621.82	289.98	54.91	72.00	157.09	168.32	262.47
Net book values per gross ton:							
Coastwise	636.83	120.29	22.61	39.65	----	7.67	133.29
Intercoastal	----	----	----	----	----	----	----
Noncontiguous	309.02	180.60	45.73	43.89	15.62	50.33	137.00
Total net book values	413.56	137.67	39.08	40.02	15.62	37.48	134.99
Number of ships:							
Coastwise	2	18	3	3	----	3	29
Intercoastal	----	----	----	----	----	----	----
Noncontiguous	5	6	8	1	4	8	32
Total	7	24	11	4	4	11	61

APPENDIX 22

SCHEDULE 3.—*Analysis of vessel tonnage, by speeds*

Speed	Group A		Group B		All companies	
	Freight, deadweight tons	Combination, gross tons	Freight, deadweight tons	Combination, gross tons	Freight, deadweight tons	Combination, gross tons
Under 10	148,220	20,744	99,164		247,384	20,744
10 to 12	962,878	24,164	714,452	7,017	1,677,330	31,181
13 to 14	93,038	60,403	225,389	17,791	318,427	78,194
15 to 16	12,115	32,042	14,440	39,701	26,555	71,743
17 to 18		20,066				20,066
19 to 20				12,418		12,418
Over 20		51,440		8,357		59,797
Total	1,216,251	208,859	1,053,445	85,284	2,269,696	294,143
PERCENT OF TOTAL						
Under 10	12.19	9.93	9.41		10.90	7.05
10 to 12	79.17	11.57	67.82	8.23	73.90	10.60
13 to 14	7.65	28.92	21.40	20.86	14.03	26.58
15 to 16	.99	15.34	1.37	46.55	1.17	24.39
17 to 18		9.60				6.82
19 to 20				14.56		4.22
Over 20		24.64		9.80		20.34
Total	100.00	100.00	100.00	100.00	100.00	100.00

APPENDIX 23

SCHEDULE 3–A.—*Analysis of vessel tonnage by speeds*

Speed	Coastwise trade		Intercoastal trade		Noncontiguous trade		Total, all trades	
	Freight, deadweight tons	Combination gross tons	Freight, deadweight tons	Combination gross tons	Freight, deadweight tons	Combination gross tons	Freight, deadweight tons	Combination gross tons
Under 10	63,450		94,823		89,111	20,744	247,384	20,744
10 to 12	464,118	13,968	1,019,830		193,382	17,213	1,677,330	31,181
13 to 14	51,884	55,468	201,789		64,754	22,726	318,427	78,194
15 to 16	16,215	50,069			10,340	21,674	26,555	71,743
17 to 18		20,066						20,066
19 to 20		12,418						12,418
Over 20		20,727				39,070		59,797
Total	595,667	172,716	1,316,442		357,587	121,427	2,269,696	294,143
PERCENT OF TOTAL								
Under 10	10.65		7.20		24.92	17.08	10.90	7.05
10 to 12	77.92	8.09	77.47		54.08	14.18	73.90	10.60
13 to 14	8.71	32.11	15.33		18.11	18.71	14.03	26.58
15 to 16	2.72	28.99			2.89	17.85	1.17	24.39
17 to 18		11.62						6.82
19 to 20		7.19						4.22
Over 20		12.00				32.18		20.34
Total	100.00	100.00	100.00		100.00	100.00	100.00	100.00

APPENDIX 24

SCHEDULE 4.—*Trend in operating revenues and expenses expressed in units of miles traveled and tons carried, for calendar years 1935, 1936, and 1937*

	1937			1936			1935		
	Group A companies	Group B companies	All companies	Group A companies	Group B companies	All companies	Group A companies	Group B companies	All companies
Miles traveled	7,247,351	8,086,077	15,333,428	7,056,941	8,047,718	15,104,659	7,520,400	8,558,788	16,079,188
Revenue, tons carried	9,924,761	10,313,490	20,238,251	9,330,336	9,497,725	18,827,861	8,613,376	9,455,354	18,068,730
PER MILE TRAVELED									
Revenues, operating:									
Freight	$7.95	$8.61	$8.30	$7.16	$7.98	$7.59	$6.09	$6.98	$6.57
Passenger [1]	1.72	.58	1.12	1.68	.66	1.14	1.42	.53	.94
All other [1]	.52	.50	.51	.38	.42	.40	.37	.40	.38
Total	10.19	9.69	9.93	9.22	9.06	9.13	7.88	7.91	7.89
Expenses, operating:									
Wages and salaries	1.16	1.06	1.11	.92	.87	.90	.81	.81	.81
Fuel	.92	.99	.95	.83	.86	.84	.75	.81	.78
Repairs	.65	.55	.59	.56	.43	.49	.46	.37	.41
Canal tolls	.18	.34	.27	.14	.33	.24	.14	.31	.23
Stevedoring	2.70	3.00	2.86	2.28	2.75	2.53	1.84	2.28	2.07
All other	1.78	2.16	1.98	1.58	1.95	1.78	1.47	1.85	1.68
Total	7.39	8.10	7.76	6.31	7.19	6.78	5.47	6.43	5.98
Direct operating profit	2.80	1.59	2.17	2.91	1.87	2.35	2.41	1.48	1.91
All other income less deductions	−.46	−.15	−.30	−.35	−.32	−.33	−.18	−.31	−.25
General and administrative expense	.97	1.08	1.03	.84	1.02	.93	.87	1.01	.94
Depreciation	.74	.42	.57	.67	.44	.55	.63	.45	.53
Provision for income taxes	.11	.04	.07	.15	.04	.10	.12	.02	.07
Net income	.52	−.10	.20	.89	.05	.45	.61	−.31	.12

[1] Passengers and other revenue have been allocated on the basis of total freight tonnage.

SCHEDULE 4.—*Trend in operating revenues and expenses expressed in units of miles traveled and tons carried, for calendar years 1935, 1936, and 1937*—Continued

	1937			1936			1935		
	Group A companies	Group B companies	All companies	Group A companies	Group B companies	All companies	Group A companies	Group B companies	All companies
PER TON OF REVENUE FREIGHT CARRIED									
Revenues, operating:									
Freight	5.81	6.76	6.29	5.41	6.76	6.09	5.32	6.32	5.84
Passenger [1]	1.25	.45	.85	1.27	.56	.91	1.24	.48	.84
All other [1]	.38	.39	.38	.29	.36	.33	.32	.36	.34
Total	7.44	7.60	7.52	6.97	7.68	7.33	6.88	7.16	7.02
Expenses, operating:									
Wages and salaries	.85	.83	.84	.70	.74	.72	.71	.73	.72
Fuel	.67	.77	.72	.62	.73	.68	.65	.73	.69
Repairs	.47	.43	.45	.42	.36	.39	.40	.34	.37
Canal tolls	.13	.27	.20	.11	.28	.19	.12	.28	.21
Stevedoring	1.98	2.36	2.18	1.72	2.33	2.03	1.61	2.06	1.84
All other	1.29	1.69	1.49	1.20	1.65	1.43	1.29	1.68	1.49
Total	5.39	6.35	5.88	4.77	6.09	5.44	4.78	5.82	5.32
Direct operating profit	2.05	1.25	1.64	2.20	1.59	1.89	2.10	1.34	1.70
All other income less deductions	−.34	−.11	−.22	−.27	−.26	−.26	−.15	−.28	−.22
General and administrative expense	.71	.85	.78	.63	.87	.75	.76	.91	.84
Depreciation	.54	.33	.43	.51	.37	.44	.55	.41	.47
Provision for income taxes	.08	.03	.06	.12	.04	.08	.11	.02	.06
Net income	.38	−.07	.15	.67	.05	.36	.53	−.28	.11

[1] Passenger and other revenue have been allocated on the basis of total freight tonnage.

Source of data: Financial reports submitted by companies to the Maritime Commission in accordance with sec. 21 of the Merchant Marine Act, 1916.

APPENDIX 25

SCHEDULE 4–a.—*Trend in operating revenues and expenses expressed in units of miles traveled and tons carried for calendar years, 1935, 1936, and 1937*

Item	Coastwise trade			Intercoastal trade			Noncontiguous trade			Total, all trades		
	1937	1936	1935	1937	1936	1935	1937	1936	1935	1937	1936	1935
Miles traveled	7, 223, 928	7, 618, 027	7, 960, 450	5, 782, 454	5, 466, 356	6, 009, 362	2, 327, 046	2, 020, 276	2, 109, 376	15, 333, 428	15, 104, 659	16, 079, 188
Revenue tons carried	10, 382, 528	10, 238, 227	9, 818, 114	6, 559, 866	5, 586, 008	5, 569, 377	3, 295, 857	3, 003, 626	2, 681, 239	20, 238, 251	18, 827, 861	18, 068, 730
PER MILE TRAVELED												
Revenue, operating:												
Freight	$6. 75	$6. 29	$5. 73	$10. 04	$9. 05	$7. 47	$8. 80	$8. 57	$7. 16	$8. 30	$7. 59	$6. 57
Passenger [1]	. 99	1. 07	. 98	. 01	. 02	. 02	4. 26	4. 41	3. 44	1. 12	1. 14	. 94
All other [1]	. 48	. 39	. 37	. 41	. 23	. 21	. 87	. 92	. 92	. 51	. 40	. 38
Total	8. 22	7. 75	7. 08	10. 46	9. 30	7. 70	13. 93	13. 90	11. 52	9. 93	9. 13	7. 89
Expenses, operating:												
Wages and salaries	. 93	. 78	. 75	1. 10	. 83	. 73	1. 70	1. 53	1. 29	1. 11	. 90	. 81
Fuel	. 85	. 75	. 74	1. 00	. 84	. 75	1. 19	1. 21	1. 01	. 95	. 84	. 78
Repairs	. 45	. 41	. 38	. 58	. 36	. 34	1. 07	1. 14	. 76	. 59	. 49	. 41
Canal tolls				. 70	. 66	. 62	. 01			. 27	. 24	. 23
Stevedoring	2. 64	2. 23	1. 90	3. 21	2. 93	2. 36	2. 68	2. 58	1. 91	2. 86	2. 53	2. 07
All other	1. 55	1. 48	1. 49	2. 10	1. 80	1. 62	2. 97	2. 84	2. 48	1. 98	1. 78	1. 68
Total	6. 42	5. 65	5. 26	8. 69	7. 42	6. 42	9. 62	9. 30	7. 45	7. 76	6. 78	5. 98
Direct operating profit	1. 80	2. 10	1. 82	1. 77	1. 88	1. 28	4. 31	4. 60	4. 07	2. 17	2. 35	1. 91
All other income less deductions	−. 56	−. 59	−. 49	−. 07	−. 12	. 06	−. 03	. 11	−. 21	−. 30	−. 33	−. 25
General and administrative expense	. 85	. 74	. 78	1. 22	1. 11	1. 10	1. 11	1. 14	1. 08	1. 03	. 93	. 94
Depreciation	. 49	. 43	. 44	. 43	. 43	. 42	1. 18	1. 32	1. 22	. 57	. 55	. 53
Provision for income taxes	. 03	. 06	. 04	. 04	. 04	. 03	. 30	. 35	. 29	. 07	. 10	. 07
Net income	−. 13	. 26	. 06		. 17	−. 21	1. 69	1. 90	1. 27	. 20	. 45	. 12

[1] Passenger and other revenue have been allocated on the basis of total freight tonnage.

SCHUDLE 4–a.—*Trend in operating revenues and expenses expressed in units of miles traveled and tons carried, for calendar years, 1935, 1936, and 1937*—Continued

Item	Coastwise trade			Intercoastal trade			Noncontiguous trade			Total, all trades		
	1937	1936	1935	1937	1936	1935	1937	1936	1935	1937	1936	1935
PER TON OF REVENUE FREIGHT CARRIED												
Revenues, operating:												
Freight	4.69	4.68	4.64	8.85	8.86	8.06	6.21	5.76	5.63	6.29	6.09	5.84
Passenger [1]	.69	.80	.80	.01	.01	.01	3.01	2.97	2.71	.85	.91	.84
All other [1]	.33	.29	.30	.36	.23	.23	.62	.62	.73	.38	.33	.34
Total	5.71	5.77	5.74	9.22	9.10	8.30	9.84	9.35	9.07	7.52	7.33	7.02
Expenses, operating:												
Wages and salaries	.65	.58	.61	.97	.81	.79	1.20	1.03	1.02	.84	.72	.72
Fuel	.59	.56	.60	.88	.82	.81	.84	.81	.79	.72	.68	.69
Repairs	.31	.31	.31	.51	.35	.36	.75	.76	.60	.45	.39	.37
Canal tolls				.62	.65	.67	.01			.20	.19	.21
Stevedoring	1.84	1.66	1.54	2.83	2.87	2.54	1.89	1.74	1.51	2.18	2.03	1.84
All other	1.07	1.10	1.21	1.85	1.76	1.75	2.10	1.92	1.95	1.49	1.43	1.49
Total	4.46	4.21	4.27	7.66	7.26	6.92	6.79	6.26	5.87	5.88	5.44	5.32
Direct operating profit	1.25	1.56	1.47	1.56	1.84	1.38	3.05	3.09	3.20	1.64	1.89	1.70
All other income less deductions	−.39	−.44	−.40	−.06	−.12	.07	−.02	.07	−.16	−.22	−.26	−.22
General and administrative expense	.59	.55	.64	1.08	1.09	1.19	.78	.77	.85	.78	.75	.84
Depreciation	.34	.32	.35	.38	.42	.46	.83	.89	.96	.43	.44	.47
Provision for income taxes	.02	.05	.03	.03	.04	.03	.21	.23	.23	.06	.08	.06
Net income	−.09	.19	.05		.16	−.22	1.19	1.28	1.00	.15	.36	.11

[1] Passenger and other revenue have been allocated on the basis of total freight tonnage.